8 Interoperable Communications

Interoperable Communications

Capability Definition

Communications interoperability is the ability of public safety and service agencies to talk within and across entities and jurisdictions via radio and associated communications systems, exchanging voice, data and/or video with one another on demand, in real time, when needed, when authorized.

Capability Outcome

A continuous flow of critical information is maintained as needed among multi-jurisdictional and multi-disciplinary emergency responders, command posts, agencies, and governmental officials for the duration of the emergency response operation in compliance with National Incident Management System (NIMS). To accomplish this, the NCR has a continuity of operations plan for public safety communications to include the consideration of critical components, networks, support systems, personnel, and an appropriate level of redundant communications systems in the event of emergency.

Capability Discussion Points

When discussing and analyzing the NCR's homeland security preparedness capabilities, stakeholder participants should consider the following:

- The emergency response communication plans that are in place which incorporate management structures following NIMS and NRP guidance (i.e., discuss how these plans ensure uninterrupted flow of critical communication).
- Communications systems that exist and how they operate reliably throughout the jurisdiction's response area (for example, how communications identify "dead spots" and how alternate strategies are in place to maintain effective communications in "dead spot" areas).
- Efforts to train personnel to use communications systems and equipment.
- Communications systems in terms of a) Interoperability across jurisdictions, b) Security, c) Redundancy, and d) Fault tolerance.
- The ways in which existing NCR plans and systems developed are being tested in exercises.

NCR Discussion Results on Interoperable Communications

Resource	S/W	Comments
People	S	• We have a core group of people that have been trained and have experience in interoperable communications. (6) • There is a common goal shared regionally. There are no opposing views. (3) • The entire region (except PG county) has all emergency agencies on 800MHZ. (3) • In interoperability projects we have identified and secured good communication, networking, enterprise and architecture for building new systems. (2) • Mobile Afis has technical people in place throughout NCR. • With the radio cache, we have begun training people as communication leaders in the incident management system • Data entry (within individual jurisdictions) • Agreements have been in place and people know/work with each other so that operationally when things happen there is commitment to get things done. • Technical leaders, day-to-day leaders, CIOs, etc., have a good strength of community. Have years of experience working together.
	W	• Need more people from the health care sector to work on interoperable communications activities. (5) • There is not enough staff to carryout regional efforts. (5)

Resource	S/W	Comments
		• Need to train new staff to replace those who will retire and beef-up overall capabilities. (3) • The health and transportation sectors also need to get on the 800MHZ. (2) • We need more trained people to evaluate our capabilities (gap analysis). (2) • There are no dedicated resources for dealing with regional emergencies. (2) • Need to win over technologies. • Need to increase number of personnel getting security clearance to increase information sharing. • Need more VOID partners to be included in interoperable communication activities. • Data transmission side of interoperable communications • Still relatively few, and not in very diverse geographical locations • Communication, networking, enterprise and architecture skill sets are (potentially) not maintained. • User knowledge and therefore habits of using these new procedures and interoperable systems not pervasive.
Equipment	S	• Radio cache (5) • Many (most) EMS, fire, police etc. agencies have/are spending to upgrade equipment to increase interoperability (4) • Computerized assisted telephone interviewing (CATI) system that helps public health manage isolation and quarantine situations., e.g., pandemic flu terror attacks, etc., is being piloted/developed; requires continuous funding (3) • Collection of data (2) • WebEOC being widely used to share emergency management information among jurisdictions, helping provide common operational picture. (2) • For voice communications, have obtained equipment from past years grants; have radio caches, trunk patching systems. • Interoperability is usually available with Feds • Equipment has been deployed • Some filter links have been built • Voice communication equipment is in place but needs to be maintained and updated • Will have enhanced fingerprint system in place throughout the NCR • Will have new mug shot system in place • EMS, fire, police, have compatible, interoperable systems • Have a network for public safety (voice) • Have 1250 radios, 5 future com repeaters, 6 Acute, ICRI • *Essence* is functions well and links all NCR hospitals with public health, local, state, epidemiologists • Hospitals funded for 800 Mhz radio network with linkages to all NCR hospitals; funded for WebEOC • Transportation include management plans and practices that follow NIMS • Transparent operating data would be integrated by the regional transportation information systems (RITI)
	W	• No redundancy; very little capability to rebuild communications abilities if it was lost. (6) • Need additional equipment, e.g., servers, fiber, 700 Mhz overlay capacity (4) • The region invests in a lot of equipment, but not all systems can talk the same language; need common platform (4) • Will require maintenance costs (4) • Reliance on commercial communication networks (e.g., Verizon) creates potential failure point due to heavy customer loads in a crisis. (3) • Don't have ongoing funding stream to maintain/sustain radio cache (2) • Communications unreliable in WMATA tunnels, trains. Need ongoing funding; absent that fix; is major communication gap. (2) • State and local level Law Enforcement is lacking secure telephone equipment (STE)--hardline, cellular, fax, etc. • Don't have sufficient equipment to meet a regional incident; information and communications

Resource	S/W	Comments
		end users are at different levels, with different needs, in different jurisdictions. • Voice communications is still lacking some equipment. • Current capabilities don't meet "business requirement" (pg 39 workbook) • When resources from outside the region support, interoperability is very weak because don't have Mutual aid agreement/joint planning.. • Ability to communicate with WV, PA, etc., limited or absent. • Limited cellular coverage in Metro limits ability of customers to call 911 for help • Planning focused exclusively on response; Prevention and mitigation lacking • No overarching secure communications network and equipment to share classified information for prevention and mitigation. • WAMATA agency crosses all jurisdictional lines; belongs to all. Major deficiency in communications design; Many "single points of failure" in its design. • Lack of ownership of solution. • WAMATA deficiencies would affect ability to work in incident • Continuing concern: potential loss of interoperability because of FCC frequency re-banding • Dependent as a region on commercial services for data; mobile data units in cars rely on 1xrtt; in event of major incident, all on one system for both data and voice. • Need to tailor hardware and software to requirements of each of the ESFs. Input of users needs to be incorporated into what is planned. • Public health is using paper and pen to function on quarantine system at this point; does not work. CATI still in early stages. • WebEOC has multiple applications that can be shared with regions. Recipients of "sharing" must be able to open, read, use. • Digital vs. analog (inconsistent) • Data sharing is incomplete and needs additional capabilities • Procurement to replace system is five years out • Buying of equipment for equipment sake; just for "bells and whistles" • Protocols are too specialized and not necessarily for the benefit of the group • Lack of transparency across agencies and jurisdictions • Will require grant funding to obtain hardware and software • Will require wireless communication throughout NCR, phone cards on NCR wireless system • Lack of systems and equipment which allows IC within DC among agencies (MPD, Fire, DPW, DDOT, etc.) and with other NCR partners except by telephone, is a major problem • NCR stakeholders currently lack an overarching secure communications network and equipment for sharing of classified information across multiple jurisdictions and levels of government. ESF 13 has been turned down for technical assistance in the past • Red cross and other key VOAD partners under ESF 6, 11, and 15 need appropriate interoperable communications equipment and have adequate equipment to respond appropriately • Need mobile computering devices on every response vehicle • Patient tracking capabilities need to be increased • Equipment needs to be tailored to the needs of each ESF • Need to bring legacy systems up to date • CATI system needs turn over forward; currently looking at jurisdictional on same platform; next cycle needs to look at disparate platforms
Training	S	• Good training network in place (4) • Had initial training COM–T course (3) • Current technology experts will be able to train and update NCR as needed (2) • Radio cache • Will require minimal training throughout the NCR • Voice 800 mhz system is good on day to day operations
	W	• Training in communication types/protocols (6) • Cache training (3) • Need COM-L training but need to modify (3)

Resource	S/W	Comments
		• Limited familiarity in equipment (3) • Information availability/sensitivity need to understand the available systems (2) • Include health and transportation (2) • Need to incorporate data side of WebEOC (2) • Need training in SOA • Quick just in time response training • Availability understanding • Advance training for architectural personnel • Training needs to follow creation of incident command system • Enhance training for data communications • Not enough qualified people operate the system • Use of technology incorporated into training • Volunteer organizations need training • Health intelligence • Training needs to be tailored to urban settings • Equipment/systems need to be used everyday to reduce training
Exercises/Evaluation	S	• Incorporating communications among jurisdictions into exercises. (3) • Continued training for ESSENCE users after policies and procedures established. (2) • Large events (e.g. inaugurations) afford good opportunities for interoperable communications evaluation. (2) • Have monthly tests and we do a lot of trainings. (2) • Voice and data interoperable communications are capabilities that can be measured during exercises. (2) • Added EOC 1,2, and 3 to 800MHZ. Regularly exercise to practice patching into EOC communication center.
	W	• We need more training and more exercises. These exercises should include VOAD partners, incorporate lessons learned from after action reports, focus on integrating data, communications, and tracking systems into common use and help assess how interoperable communications will be involved/interact with other ESFs' activities. (36) • Planning, development, and operations throughout NCR should include exercises and evaluations. (2) • Need more protocol development. • Need to retest communications after policies and procedures established. • Need to know how interoperability affects bottom line. • Infrequent training/exercise schedule. • Exercise gaps are almost never addressed. • Only exercises to date have been internal of in a support role. • Minimal training in NIMS done in DC OCME • Many exercises are too big to have value; need smaller exercised to allow participants to identify pieces that are not working effectively. • Not good at measuring the effectiveness of non-exercise activities (e.g., inauguration.) • Need better communication and coordination with federal government. • Need to establish a common voice and data network across all ESFs. • Need to do a better job sharing critical AARs. • Need to create a health information group that draws together interoperable issues.
Plans, Policies and Procedures	S	• Executive agreements, MOUs, and mutual aid are in place and are multi-jurisdictional (police, EMS, fire) (9)
	W	• Keystone interoperability is a planned exchange of voice and data across traditional boundaries (it is not everyone talking to everyone)/governance is underdeveloped for voice and data/need master plan for network in region/path is clear, execution is weak/planned exchange includes filtering of key information (14) • Communication systems and processes need to integrate hospitals, first responders, and support (including public works, ESF #3 agencies), transportation function. (6) • Managing secure communications/sharing classified information across multiple jurisdictions

Resource	S/W	Comments
		and levels of government (2) • Don't have MOU in place for radio cache deployment (2) • Need regional standards for content of messages/information • Need to expand definition of "critical information" to include health intelligence (threat ID, patient tracking, resource availability)/3 medical communication centers need to share procedures/implement health information group (public health, hospitals, law enforcement, EMS, Medical examiner)/include Red Cross and similar organizations involved in ESFs 6, 11, 15 in interoperable communications planning. • Mortuary surge must be considered – include medical examiner jurisdictions in all exercises and planning • Need more practice in field • Information must be understandable/useful to end users – have not been successful with this in the past.

NCR Concept Papers and Initiative Plans

CONCEPT PAPER ***Preliminary Document – Presented for Review and Discussion***		January 27, 2006 Russell A. Yurek Director – Office of Maintenance MD State Highway Administration 7491 Connelley Drive Hanover, MD 21076 410-582-5505 RYurek@SHA.State.MD.US	
Project Title:	**National Capital Region Video Sharing Distribution System**	**Estimated Grant Amount**	$2,500,000
NCR Strategic Goal Alignment:	Goal 2: Informed, Prepared, Secure NCR Goal 3: Prevent and Mitigate Threats & Events Goal 4: Respond & Recover from Threats & Events	**Allowability**	
Estimated Timeline	20 Months from receipt of grant	**Dependencies and Cost Factors:**	*Final delivery depends on Total Number of CCTV cameras operational at the time of implementation total cost of distribution hardware/software at the time of purchase..*

Problem Statement/Project Description:

In times of great natural disaster, terrorist attack, and other regional emergencies video images can provide vital real-time information to support saving lives, limiting infrastructure and property loss, and ensuring coordinated, efficient and effective emergency response.

Video images are an important tool for any and all agencies involved in emergency response, including law enforcement, fire and medical personnel, transportation agencies, private sector partners, the military and government, and the public. To provide such a tool for all such entities throughout the NCR, The Maryland Department of Transportation proposes to develop an economical, scalable, and robust video image distribution system for the NCR that will be integrated into the Regional Integrated Transportation Information System (RITIS). RITIS is a major project in the NCR, funded in part by an existing

UASI grant, which is currently integrating the region's incident and transportation databases and dispatch systems to facilitate easy sharing of critical information. This proposal would add the ability to share both still images and real time full-motion video from various sources in the Washington Metropolitan area through the RITIS project. The proposed system would be operated and maintained by the participating agencies under the auspices of the RITIS project, thus eliminating the need for private sector dependency and creating a standardized, dependable, region-wide resource.

The initial participants in this enhancement of RITIS will be transportation agencies (MDOT with 70 cameras, VDOT with 125 cameras, DDOT with 120 cameras, and MCTMC with 159 cameras), but the ultimate vision of both RITIS and the video sharing initiative, is one wherein all types of emergency response entities both provide and receive information. Accordingly, the development of RITIS, and the video sharing component, will be scalable to easily incorporate future video sources. Furthermore, the system will be designed so that numerous agency "users" other than the initial contributors will be able to access the videos and images. Still images and full motion video will be integrated into RITIS which will act as the video & image "broker" for non-contributing agencies such as the traveling public, media, first responders, etc.

Deliverables from this program include a video and image distribution system for the National Capital Region, as well as a detailed technical report on how other DOT's or organizations with CCTV cameras can implement a CCTV video distribution system. Such a report would add tremendous value to future participants as well as other critical regions which could benefit greatly.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Tasks	Collaborating Partners	Deliverables	Target Date
1. Develop concept of Operations	VDOT, MDOT, DDOT, and MCTMC along with UMD	Draft Report	2 Months After Start
2. Develop Requirements Document	University of Maryland	Draft Report	5 Months After Start
3. System Design	University of Maryland/Consultant	Draft Report	6 Months After Start
4. Telecom Upgrades (where necessary)	Agency Consultants		8 Months After Start
5. Software and Hardware procurement	University of Maryland	Hardware & Software	9 Months After Start
6. Software Development	University of Maryland & Consultants		10 Months After Start
7. Integration into RITIS	University of Maryland		22 Months After Start
8. Acceptance Testing	Consultant	Draft Report	23 Months After Start
9. Documentation of hardware and software options	University of Maryland	Draft Report	24 Months After Start
10. Final "How-To" report development.	University of Maryland	Final Report	

Project Performance Measures	Baseline Value	Target Value
1. Number of CCTV cameras fully integrated with image capture capabilities		100%
2. Number of CCTV cameras fully integrated with full-motion video capabilities		100%
3. System delivered and functional by target date		On time

4. System delivered within budget		On budget
5. System design is ITS National & State Architecture Compliant		Fully Compliant

INITIATIVE PLAN

National Capital Region
Video Sharing Distribution System

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   The name of this initiative is *"National Capital Region Video Sharing Distribution System"*. This project will integrate all of the CCTV videos from VDOT, MDOT, MCTMC, and DDOT into the RITIS platform which enables the sharing of video images amongst a large number of agencies and the public. Sharing video with each agency (including public safety agencies) is highly needed to help reduce the vulnerability of critical infrastructure by deterring terrorist attacks. It will also help in responding natural disaster by aiding government officials in evacuation monitoring and in helping with the response to terrorist attacks. Furthermore, it will help in recovering from said attacks, disasters and emergencies by allowing individuals to view what is happening throughout the region.

   By undertaking this project, the national capital region is expanding region collaboration by enabling video information sharing and ensuring interoperable communications capabilities. With the integration of video images into the RITIS platform, all video feeds will be standardized and made available to all necessary parties (participating DOTs, police, fire and rescue, government agencies, and the public) through easy to use interfaces. This immediately addresses three of the major priority needs (C.1 , C.4, C.5) addressed in the FY 2006 Homeland Security Grant Program document. In addition to the resulting integrated system, another deliverable of this project is a document describing how other agencies can implement a video sharing distribution system. This will help other states throughout the country.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   This project will integrate the CCTV camera systems of DDOT, MDOT, and VDOT which covers the complete national capital region and the entire state of Maryland. Since the video sharing platform will be incorporated into the existing RITIS system, any other agency who wishes to have access to video and images from the region will be able to do so. This includes federal agents, police, fire and rescue, government officials and the public. In addition to the final integration effort, there will be a document created that will spell out the steps necessary for other agencies to integrate their video systems. Therefore, this project will potentially effect a very large, multi-state geographic area that will ultimately be much larger than the national capital region.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

This project is building off of the existing RITIS platform which was funded by a previous UASI grant. Therefore, much of the tools, resources, and governance structure are already in place to take control of this project and get it functioning in a short amount of time. 90% of the staff needed to start development are already on-hand. The necessary relationships among the various DOTs are also already in place and strong. Minimal additional staffing resources may be needed from consulting firms outside of the RITIS governance structure. If this is needed, the University of Maryland and the Maryland State Highway Administration have the appropriate contracting mechanisms needed to bring on additional help.

4. **Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.**

   Management and oversight of the project will be the responsibility of the Maryland State Highway Administration (MDSHA) with guidance from the existing University of Maryland Center for Advanced Transportation Technology Laboratory (CATT Lab) CapCom/RITIS governance structure. MDSHA will be responsible for implementation, status reporting, and final documentation and reporting to the Metropolitan Washington Council of Governments (MWCOG) Management Operations and Intelligent Transportation Systems (MOITS) committee. MDSHA will assemble a team of supporting management representatives from each participating agency, technical consultants, and information technology specialists from DDOT, SHA, WMATA, and VDOT to support, oversee, and implement recommendations received from the CATT Lab. The agencies will closely cooperate and support the effort so that results can be shared and implemented across jurisdictional boundaries.

5. **Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.**

   The initiative supports current homeland security efforts in the District of Columbia, Maryland, and Virginia to expand regional collaboration and information sharing to improve public safety and enhance the ability of local jurisdictions to cooperatively detect and respond to terrorist attacks, major emergency, or disasters incidents by ensuring that critical real-time video data is shared effectively across multi-disciplinary and multi-jurisdictional boundaries. This initiative directly supports the National Preparedness Goals of expanding regional collaboration to embrace partnerships and information sharing across multiple jurisdictions, regions, and States to effectively build capabilities cooperatively to reduce or mitigate terrorist threats.

CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion

January 27, 2006

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Project Title:	**Interoperable Communications System Prince George's County**	**Estimated Grant Amount**	$3,818,000
NCR Strategic Goal Alignment:	Goal 3: Prevent and Mitigate Threats and Events Goal 4: Respond and Recover from Events	**Allowability**	
Estimated Timeline	24 Months from receipt of grant	**Dependencies and Cost Factors:**	

Problem Statement/Project Description:

The Maryland Department of Transportation (MDOT) State Highway Administration (SHA) is responsible for performing a variety of essential support functions in the National Capital Region (NCR) during terrorist attacks, major disasters, or emergency incidents. These tasks include evacuation traffic management, first responder incident support, debris removal, maintaining critical transportation infrastructure assets, and performing restoration and recovery operations. In the NCR, it is essential that these activities be closely coordinated across multi-jurisdictional boundaries with a variety of supporting agencies. These include federal and local law enforcement, fire and emergency response, governmental agencies, regional emergency operations centers, and jurisdictional transportation departments. A critical component of SHA's ability to perform these essential functions effectively is the ability to conduct voice and data communications across jurisdictional boundaries with other first responding agencies. SHA's existing low band two way radio system does not currently support interoperable communications during these events.

This project involves upgrading SHA's Emergency Response Communications Network (ERCN) in Prince George's County to ensure interoperable data and voice communications. The system would be capable of supporting both voice and data traffic using an open based architecture to permit rapid adaptation to changing technologies. This project includes installing additional antennas, base stations, routers, portable radios, communications infrastructure and funding for design, engineering, and construction. The system would operate on designated 800 MHZ frequencies and be compatible with SHA's existing low band radio system. Ultimately the system would be able to migrate to operate on the proposed 700 MHz public safety channel frequencies. This will ensure SHA has the ability to effectively conduct direct radio and data communications with first responders, county and municipal emergency operations centers, law enforcement agencies, NPSPAC channels, MDOT modals, and all other State and Regional Agencies.

Lessons learned from the 9-11 incidents in New York City and Hurricane Katrina indicate that interoperable communications between front line emergency managers is critical to the effectiveness of responding to and coordinating emergency operations during terrorist incidents and emergency events. Failure to install the system in a timely manner would affect the ability of SHA to adequately coordinate operations with other responding agencies during severe events resulting in the potential for loss of life, additional property damage, interruption to interstate commerce, environmental damage, and could significantly affect public safety.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Tasks	**Collaborating Partners**	**Deliverables**	**Target Date**
1. Contract Coordination with Prince George's County	MDOT, SHA, PGDPW&T	Contractual Agreement	2 Months After Start
2. Construction, Installation, & Integration	SHA, PGDPW&T, Contractor	800 MHz Communication System	22 Months After Start
3. System Testing	SHA, PGDPW&T, Contractor	Operational 800 MHz Communication System	24 Months After Start

Project Performance Measures	Baseline Value	Target Value
1. Multi-Jurisdictional Interoperable Voice and Data Communications	0 %	100 %

INITIATIVE PLAN

Interoperable Communications System
Prince George's County

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

The name of this initiative is "*Interoperable Communications System - Prince George's County"*. The Department of Homeland Security (DHS) has identified the lack of interoperable wireless communication systems as an issue that continues to affect public safety agencies in communities across the country. Interoperable communications, the ability to provide an uninterrupted flow of critical real-time information among responding multi-disciplinary and multi-jurisdictional agencies at all levels of government before, during, and after an event, has been identified as a capability specific priority. The Metropolitan Washington Council of Governments (MWCOG) has further identified interoperable communications as one of the regions 14 priority capabilities. This includes supporting efforts to engineer, design, and construct critical communications networks, supporting equipment, and regionally redundant voice and data communications systems.

The proposal provides for the coordination of development and installation of an interoperable communications system between the Maryland State Highway Administration (SHA) and the Prince George's County Government. The project includes procuring, constructing, and installing all additional antennas, base stations, routers, portable radios, communications infrastructure and funding for design, engineering, and construction. The project would be a joint effort and would ensure that both SHA and Prince George's County acquire the ability to conduct essential interoperable voice and data communications with other responding agencies and departments.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The project would provide the SHA and Prince George's County Government with the ability to conduct interoperable communications across multi-disciplinary and multi-jurisdictional boundaries. The system would be a component of a larger statewide interoperable communications system across Maryland including the National Capital Region (NCR). It would provide the capability to perform interoperable communications across National Public Safety Planning Advisory Committee (NPSPAC) 800 MHz Call and Tactical radio channels. This would provide SHA and Prince George's County with the ability to directly communicate real-time voice and data with first responding law enforcement, fire and emergency, and public works personnel including direct communication links to established emergency operations centers. By coordinating these efforts regionally, SHA and Prince George's County can prevent duplication of effort and enhance interoperable communications throughout the NCR.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

The Maryland State Highway Administration currently owns, maintains, or leases communications towers and equipment throughout the National Capital Region (NCR). This project will expand upon these resources to develop a regional interoperable communications system for Prince George's County. This joint effort will allow agencies to share costs, leverage existing and new technologies, and develop consistent, unified operating protocols and procedures. The project will also encourage the sharing and dissemination of lessons learned and best practices between agencies.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Management and oversight of the project will be the responsibility of the Maryland Department of Transportation (MDOT) State Highway Administration (SHA). SHA will be responsible for reporting the status and final recommendations of the project final report to the Metropolitan Washington Council of Governments (MWCOG) Management Operations and Intelligent Transportation Systems (MOITS) committee on a regular basis. SHA will assemble a team of supporting management representatives, systems engineers, and information technology specialists from SHA, MDOT, and Prince George's County, to support, oversee, and manage the project. The effort will be closely coordinated with other regional interoperable communications projects under design or development. Project meetings will be conducted to keep stakeholders informed of the progress of the study. The agencies will closely cooperate and support the effort so that results can be shared and implemented across jurisdictional boundaries.

5. Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.

The initiative supports current homeland security efforts in the District of Columbia, Maryland, and Virginia to ensure responding agencies have the capability to conduct real-time interoperable voice and data communications necessary to share critical information and support emergency operations. Communications interoperability underpins the ability of Federal, State, Regional, and Local entities to work together effectively to prevent, protect against, respond to, and recover from terrorist attacks,

major disasters, and other emergency events. By supporting these efforts, the initiative serves to improve public safety and provides redundant communications systems and consistent shared systems architecture to provide interoperable voice and data emergency communications throughout the NCR.

CONCEPT PAPER ***Preliminary Document – Presented for Review and Discussion***		January 27, 2006 Russell A. Yurek Director – Office of Maintenance MD State Highway Administration 7491 Connelley Drive Hanover, MD 21076 410-582-5505 RYurek@SHA.State.MD.US	
Project Title:	**Interoperable Communications System Montgomery County**	**Estimated Grant Amount**	$4,587,000
NCR Strategic Goal Alignment:	Goal 3: Prevent and Mitigate Threats and Events Goal 4: Respond and Recover from Events	**Allowability**	
Estimated Timeline	24 Months from receipt of grant	**Dependencies and Cost Factors:**	

Problem Statement/Project Description:

The Maryland Department of Transportation (MDOT) State Highway Administration (SHA) is responsible for performing a variety of essential support functions in the National Capital Region (NCR) during terrorist attacks, major disasters, or emergency incidents. These tasks include evacuation traffic management, first responder incident support, debris removal, maintaining critical transportation infrastructure assets, and performing restoration and recovery operations. In the NCR, it is essential that these activities be closely coordinated across multi-jurisdictional boundaries with a variety of supporting agencies. These include federal and local law enforcement, fire and emergency response, governmental agencies, regional emergency operations centers, and jurisdictional transportation departments. A critical component of SHA's ability to perform these essential functions effectively is the ability to conduct voice and data communications across jurisdictional boundaries with other first responding agencies. SHA's existing low band two way radio system does not currently support interoperable communications during these events.

This project involves upgrading SHA's Emergency Response Communications Network (ERCN) in Montgomery County to ensure interoperable data and voice communications. The system would be capable of supporting both voice and data traffic using an open based architecture to permit rapid adaptation to changing technologies. This project includes installing additional antennas, base stations, routers, portable radios, communications infrastructure and funding for design, engineering, and construction. The system would operate on designated 800 MHZ frequencies and be compatible with SHA's existing low band radio system. Ultimately the system would be able to migrate to operate on the proposed 700 MHz public safety channel frequencies. This will ensure SHA has the ability to effectively conduct direct radio and data communications with first responders, county and municipal emergency operations centers, law enforcement agencies, NPSPAC channels, MDOT modals, and all other State and Regional Agencies.

Lessons learned from the 9-11 incidents in New York City and Hurricane Katrina indicate that interoperable communications between front line emergency managers is critical to the effectiveness of responding to and coordinating emergency operations during terrorist incidents and emergency events. Failure to install the system in a timely manner would affect the ability of SHA to adequately coordinate operations with other responding agencies during severe events resulting in the potential for loss of life, additional property damage, interruption to interstate commerce, environmental damage, and could significantly affect public safety.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Tasks	**Collaborating Partners**	**Deliverables**	**Target Date**
1. Contract Coordination with Montgomery County	MDOT, SHA, MDPW&T	Contractual Agreement	2 Months After Start
2. Construction, Installation, & Integration	SHA, MDPW&T, Contractor	800 MHz Communication System	22 Months After Start
3. System Testing	SHA, MDPW&T, Contractor	Operational 800 MHz Communication System	24 Months After Start

Project Performance Measures	Baseline Value	Target Value
1. Multi-Jurisdictional Interoperable Voice and Data Communications	0 %	100 %

INITIATIVE PLAN

Interoperable Communications System
Montgomery County

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

The name of this initiative is "*Interoperable Communications System - Montgomery County"*. The Department of Homeland Security (DHS) has identified the lack of interoperable wireless communication systems as an issue that continues to affect public safety agencies in communities across the country. Interoperable communications, the ability to provide an uninterrupted flow of critical real-time information among responding multi-disciplinary and multi-jurisdictional agencies at all levels of government before, during, and after an event, has been identified as a capability specific priority. The Metropolitan Washington Council of Governments (MWCOG) has further identified interoperable communications as one of the regions 14 priority capabilities. This includes supporting efforts to engineer, design, and construct critical communications networks, supporting equipment, and regionally redundant voice and data communications systems.

The proposal provides for the coordination of development and installation of an interoperable communications system between the Maryland State Highway Administration (SHA) and the Montgomery County Government. The project includes procuring, constructing, and installing all additional antennas, base stations, routers, portable radios, communications infrastructure and funding for design, engineering, and construction. The project would be a joint effort and would ensure that both SHA and Montgomery County acquire the ability to conduct essential interoperable voice and data communications with other responding agencies and departments.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The project would provide the SHA and Montgomery County Government with the ability to conduct interoperable communications across multi-disciplinary and multi-jurisdictional boundaries. The system would be a component of a larger statewide interoperable communications system across Maryland including the National Capital Region (NCR). It would provide the capability to perform interoperable communications across National Public Safety Planning Advisory Committee (NPSPAC) 800 MHz Call and Tactical radio channels. This would provide SHA and Montgomery County with the ability to directly communicate real-time voice and data with first responding law enforcement, fire and emergency, and public works personnel including direct communication links to established emergency operations centers. By coordinating these efforts regionally, SHA and Montgomery County can prevent duplication of effort and enhance interoperable communications throughout the NCR.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

The Maryland State Highway Administration currently owns, maintains, or leases communications towers and equipment throughout the National Capital Region (NCR). This project will expand upon these resources to develop a regional interoperable communications system for Montgomery County. This joint effort will allow agencies to share costs, leverage existing and new technologies, and develop consistent, unified operating protocols and procedures. The project will also encourage the sharing and dissemination of lessons learned and best practices between agencies.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Management and oversight of the project will be the responsibility of the Maryland Department of Transportation (MDOT) State Highway Administration (SHA). SHA will be responsible for reporting the status and final recommendations of the project final report to the Metropolitan Washington Council of Governments (MWCOG) Management Operations and Intelligent Transportation Systems (MOITS) committee on a regular basis. SHA will assemble a team of supporting management representatives, systems engineers, and information technology specialists from SHA, MDOT, and Montgomery County, to support, oversee, and manage the project. The effort will be closely coordinated with other regional interoperable communications projects under design or development. Project meetings will be conducted to keep stakeholders informed of the progress of the study. The agencies will closely cooperate and support the effort so that results can be shared and implemented across jurisdictional boundaries.

5. Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.

The initiative supports current homeland security efforts in the District of Columbia, Maryland, and Virginia to ensure responding agencies have the capability to conduct real-time interoperable voice and data communications necessary to share critical information and support emergency operations. Communications interoperability underpins the ability of Federal, State, Regional, and Local entities to work together effectively to prevent, protect against, respond to, and recover from terrorist attacks,

major disasters, and other emergency events. By supporting these efforts, the initiative serves to improve public safety and provides redundant communications systems and consistent shared systems architecture to provide interoperable voice and data emergency communications throughout the NCR.

CONCEPT PAPER		January 26, 2006 Robert LeGrande, II Deputy Chief Technology Officer Office of the Chief Technology Officer 441 4th Street, NW Suite 930 S Washington, DC 20001 202-727-2189 direct/202-494-4330 cell	
Project Title:	**Reverse 911/Mass Notification**	**Estimated Grant Amount**	$400,00
NCR Strategic Goal Alignment:	Strategic Goal 3: An enduring capability to protect the NCR by preventing or mitigating "all-hazards" threats or events. ▪ Strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness. ▪ resources.	**Allowability**	*Yes*
Estimated Timeline	November '06-December '07	**Dependencies and Cost Factors:**	To be verified with the SAA office

Problem Statement/Project Description:

Problem:
In an emergency, government agencies need to notify targeted population groups of evacuation, hazardous material, bio threat, or other crisis situations to ensure proper public awareness and to provide response directives. Orderly facilitation of mass evacuation along a timed and preplanned set of routes is a direct evacuation critical function to protect populations and mobilize first responders during such disaster responses**.** Coordination of these activities throughout the National Capital Region (NCR) must be coordinated during a region wide disaster event.

Project Description:
The NCR's approach to Reverse 911 is to leverage existing R911 systems and PSTN customer data to facilitate regional notifications, cross-jurisdictional message creation, first responder mobilization, and evacuation logistics.

Since many of the 18 NCR jurisdictions have successfully implemented mass notification systems, this project seeks to maximize previous installations as well as the underlying infrastructure and customer data and to ensure that proper National Capital Region wide notification is coordinated and delivered. It is not anticipated that any jurisdiction will need to replace an existing system with a new one.

Additionally, new communications mechanisms such as VOIP, cellular, SMS, and special PBXs must be effectively integrated as delivery mechanisms.

The Project will have the following core components:

- **Notification and Message sharing protocols --** establish the structure, templates, and policy guidance for launching cross jurisdictional messages.
- **Horizontal Integration of existing mass notification systems--** build tools, infrastructure, data stores, and customer data pipes which allow cross jurisdictional mass notifications.
- **Training and outreach programs**—effective multimedia campaigns which can be componentized and rapidly launched.
- **Telcom and cable customer data acquisition business model** – business model for acquiring and sharing customer data

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Task(s)	**Owner(s) or CP**	**Deliverable(s)**	**Target Date(s)**
1. Message templates and GIS layers	Credentialing program Metro CIO DHS NIMS	i. Shareable specialized GIS layers ii. Text, graphical, and multilingual messages iii. Message scripts and template	Completed by 12/31/07
2. Data integration plan and mechanism	Credentialing program METRO CIO	iv. Horizontal integration web service v. Launch web service vi. Timed evacuation web service	Completed by 12/31/07
3. Customer data acquisition plan and business model	METRO CIO	• Plan and cost sharing agreement • Customer data distribution plan • Simplified billing mechanism • Access Control and PKI infrastructure	Completed by 12/31/07

Project Performance Measures	Baseline Value	Target Value
1. Outreach plan	0	18
2. Billing and customer acquisition plan	0	1
3 Horizontal Integrations	0	18
4. New Technology Delivery Mechanisms	0	5

INITIATIVE PLAN

Reverse 911/Mass Notification

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

National Capital Region Reverse 911/Mass Notification

NCR Reverse 911/Mass Notification will strengthen the NCR's response, mobilization, early warning, and evacuation capabilities.

Utilizing existing mass notification systems, this program is primarily a horizontal integration of technical infrastructure, data (GIS layers, customer and user data), protocols (cross jurisdictional notification agreements), and outreach.

Credentialing will also comply with PIV II, thus guaranteeing interoperability with federal agencies.

The credentialing system makes uses of NIMS and FIPS standards, and data sharing agreements defined as part of the NCRIP Data Exchange Hub

Outputs will include: physical credentials such as smart cards, rfid cards or other rfid enabled devices (smart tags), photo cards, tokens, passwords, and others

2. Regional Construct: Briefly describe the geographical context of this Initiative.

This is a cross jurisdictional program, serving all NCR governmental entities.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

The creation and definition of the Data Exchange hub forms the framework for the technical design of the credentialing system components. Also key to the effort is a data model, which can be implemented beside the system of record. The matrix below defines tools, processes, and resources for this project.

Resource	Process	Tool	New / Leveraged
System of Record (ERP HR)	Credential Enrollment, Revocation, Management, Issuance.	Polls, Triggers, web services	Leverage data and add credential specific attributes defined and governed by Metro CIO, FIPS, and NIMS Leverage existing personnel actions.
Network infrastructure	Grant/Revoke access to data, objects, assets, or airtime. Define data exchange parameters and agreements. Build alternate SATCOM or wireless delivery mechanism	Federated Identity management, Wireless network, Individual LAN/WAN	Leverage other NCRIP MOU and exchange vehicles. Create mechanism for sharing infrastructure and other assets
Issuing Authority	Create rapid issuance process, integrate with NCR and federal data, build rapid, event based "contextual" credentials. Allow for redundancy and disaster recovery.	Card manufacturing facilities, mobile command center, facility control systems	Train law enforcement and other agencies, define and create contextual or special credentials Use DOJ and other data exchange agreements to perform warrant inquiries.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

A stakeholder working group, MetroCIO, and subgroups devoted to the following usage scenarios will govern credentialing:

- Physical Access
- Logical Access
- Critical Infrastructure Access and Monitoring
- Family Assistance center special credentials
- Patient Tracking
- Practitioner License verification
- Law enforcement inquiry and Biometrics
- Standards compliance and review
- Mortuary response

A comprehensive communications plan and scheduled briefings will be vehicles used for continuous stakeholder alignment, and risk management

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative, credentialing, addresses all three national priorities, "Implement the National Incident Management System and National Response Plan, Expanded Regional Collaboration, Implement the interim National Infrastructure Protection Plan." Credentialing ensures incident, facility, and asset protection while providing the logistical backbone for tracking people and things in an emergency.

<table>
<tr><td colspan="2" rowspan="3">CONCEPT PAPER: ESF-2</td><td colspan="2">January 26, 2006</td></tr>
<tr><td colspan="2">Robert LeGrande, II
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Washington, DC 20001
202-727-2189 direct/202-494-4330 cell</td></tr>
<tr><td>Project Title:</td><td>National Capital Region Interoperability Program (NCRIP) Phase 2</td><td>Estimated Grant Amount</td><td>$25 Million</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>Strategic Goal 3: An enduring capability to protect the NCR by preventing or mitigating "all-hazards" threats or events.
▪ Strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness.
Strategic Goal 4: A sustained capacity to respond to and recover from "all-hazards" threats or events across the NCR.
▪ Ensure the capacity to operate multi-level coordinated response and recovery.
▪ Ensure adequate and effective sharing of resources.</td><td>Allowability</td><td>Yes</td></tr>
<tr><td>Estimated Timeline</td><td>June '06-December '07(continuous with the activities of the 2004/2005 UASI grant NCRIP program)</td><td>Dependencies and Cost Factors:</td><td>To be verified with the SAA office</td></tr>
<tr><td colspan="4">Problem Statement/Project Description:
Problem:
Based on recent national disaster events, including the 9/11 terrorists attacks, hurricanes Katrina and Rita and others, reliable and secure desktop and mobile access, via non-contentious government networks, to and exchange with responding jurisdictions and agencies including police, fire, EMA, EMS, medical, volunteer and others, is essential for the saving of lives, the preservation of property and to ensure that proper comprehensive communication systems and processes are available on demand to support organized emergency response. The ability to accomplish this does not currently exist in the NCR. However, through the development of a regional interconnected government fiber network (INETS), a regional government wireless broadband network (RWBN) and a regional data exchange hub (DEH), the NCR will be able to deliver the critical communications infrastructure, as well as the first responder conveyed data and application requirements together with the operational and organizational governance to ensure efficient and effective daily and regional emergency event functionality.

Project Description:
National Capital Region Interoperability Program (NCRIP) Phase 2: Regional INETS and Wireless Broadband Network design and deployment (collectively NCRnet) and Data Exchange Hub (DEH) implementation. The NCRIP will facilitate comprehensive inter-regional data sharing throughout the National Capital Region (NCR) and between the NCR and critical</td></tr>
</table>

Federal, DOD and other State agencies and fusion centers. The NCRIP program will benefit all ESF end users and facilitate whenever-wherever sharing of critical NCR data and applications between and within emergency responder ESFs. The program will accomplish this objective via a designed and deployed network of government owned and operated high speed fiber optics/microwave, a regional broadband wireless network and an essential Data Exchange Hub to make possible the secure and effective sharing of critical responder data, information and applications. Specific project details with quantities are detailed in the Preliminary Project Plan and Performance Measure sections.

Connecting NCR INETS will enable secure communications between jurisdictions and agencies via a government fiber optic network supporting voice, email, imaging and files, video and daily and emergency event data exchanges within the NCR. Additionally, critical first responder data and applications including WebEOC, GIS, Roam Secure, CapWin, Credentialing and many other regional interoperable applications and data will be supported through the regional INET. Government operated INETS exist within individual jurisdictions in the NCR, but are currently not interconnected to facilitate secure NCR jurisdiction to jurisdiction communications. The NCRIP will ensure that these networks are expanded and connected.

The Regional Wireless Broadband Network (RWBN) will provide essential high speed, large volume throughput, for mobile, on scene access and sharing by responders to critical information, in the same manner, as will be achieved for desktop communications via the INETS project. The broadband wireless network will support reliable and secure mobile access to the same desktop data and applications as achieved by the INET and will utilize the INET to facilitate interconnectivity of the wireless sites to NCR jurisdictions' Information Technology (IT) backbone. Mobile access and interoperability, through government's secure and available networks is critical to avoid reliance on commercial mobile data networks that are prone to failure or unavailable to access during emergency events. The NCR wireless broadband network will be both cost effective and available on demand to the NCR and is an essential network for disaster management and response, as disasters are field intensive.

The DEH will enable the secure an efficient exchange of secure data and applications within the NCR for all ESFs. The DEH is an exchange technology integrated into the IT architecture of each NCR jurisdiction to facilitate secure access and exchange of critical data and applications, as identified by ESFs through initial phases on the NCRIP, on a daily and emergency event management access. The DEH will aggregate critical information, including Responder Assets, regional video camera, all relevant and applications and other easy to access, search, retrieve and use to best manage regional daily and disaster events. The DEH will be accessible from desktops via the INET and in the field via the broadband wireless network and will provide real time, anytime assess to the data deemed most essential by ESFs.

In summary, the 2006 UASI grant request is designed to continue the deployment and expansion of INETS and the RWBN beyond the core jurisdictions achieved through the 2005 grant. The DEH project will continue implementation of the data exchange technology onto a web services platform, provide technical support to NCR jurisdictions to support their implementation of the DEH and the development, or the conversion of, data to national standards for sharing through the DEH. Operational and organizational governance for the NCRIP will also be finalized for executive consideration and implementation during this phase of the program. Technical standards will be followed for both infrastructure and data to ensure regional and national sharing and access compliance. Ultimately, we anticipate that this program can serve as a model for other UASI regions or other regional implementation programs leading to greater efficiency and reduced cost as national efforts to develop and/or enhance regional sharing are initiated.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or CP	Deliverable(s)	Target Date(s)
1. Regional Wireless Broadband Network Deployment Phase 2	NCR Radio Managers RPWGI ESF-2: MetroCIOs	vii. Broadband wireless network radio site expansion to extend coverage through out Fairfax County viii. Network operational support	See attached Project Schedule
2. INETS integration Phase 2	RPWGI ESF-2: MetroCIOs	ix. Redundant connectivity in DC, Fairfax, Montgomery, Arlington, Alexandria and Prince George counties via a Core Ring x. All other NCR jurisdictions connected with either single point microwave or fiber xi. Network Operational support	See attached Project Schedule
3. Data Exchange Hub	RPWGI	• Expand DEH deployment	See attached Project

Phase 2	ESF-2: MetroCIOs All ESF end users	throughout the NCR • Conversion and/or development of NCR Resource Management data • Refine operational standards • Network operational support	Schedule

Project Performance Measures	**Baseline Value***	**Target Value****
1. INET fiber and microwave connections	9	8
2. RWBN tower sites	17	60
3. RWBN controller sites	1	2
4. DEH connections supporting priority level data exchanges	4	8

* Infrastructure to be completed and in place by 12/31/06 ** Total not additional

INITIATIVE PLAN

National Capital Region Interoperability Program for Data Exchange (NCRIP)

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

National Capital Region Interoperability Program for Data Exchange (NCRIP)

Comprehensive data exchange for all Emergency Support Functions (ESFs) within the NCR is a priority requirement and objective of the NCRIP. Through the development of a regional interconnected government fiber network (INETS), a regional government wireless broadband network (RWBN) and a regional data exchange hub (DEH), NCR interoperable communications weaknesses, regarding the exchange of critical incident management data, will be addressed and resolved in the NCR over the next five years. This program provides secure, non-commercial, restricted access to critical regional communications networks for both high speed fiber optics and wireless broadband mobile communications to ensure that the infrastructure for facilitating real time, anytime data communications within the NCR is achieved. The DEH will organize and make available ESF data and applications on demand to manage daily and emergency communications in the NCR.

A steady stream of data sharing operational functionality will be achieved within each successive year of the program providing access to the deliverables of the NCRIP beginning in calendar year 2006. These advancements will increase data interoperability for all ESFs within the region and allow the NCR to better plan for and respond to NCR emergencies and disaster events. Over the course of the next five years, the collective projects to support this initiative will cost approximately $90m. The secure, reliable and fully interoperable capabilities and value gained from this investment will be immeasurable and will enhance NCR interaction and incident response.

The outcomes from the three infrastructure projects will profoundly change the manner in which incidents and day-to-day interactions occur between the members of the National Capital Region. In an area that is at high risk for man made threats, the increase in data exchanges will significantly enhance the first responder's abilities to share data before, during and after incidents. The ability for

real-time data exchanges, whether to/from the Emergency Operations Center (EOC) or on scene in the field, will be possible not only on a textual basis, but also for pictures, video and GIS information. The ability to effectively deploy, manage and track resources (personnel as well as inventory) across the entire region will also be made possible. All of which significantly prepares the region to efficiently and effectively respond and manage regional disasters.

Specifically, this initiative will address the need to design and deploy the infrastructure for the above named projects. Additionally, this initiative has far sweeping impact on other essential interoperable projects in the NCR, including AFIS – (fingerprinting), WebEOC, Patient Tracking, EOC Videoconferencing, Roam Secure, Credentialing, Reverse 911, ESSENCE – Applied Physics Lab, CapWin; as it will facilitate efficient access and regional data exchange for these and future interoperable initiatives through the NCRIP infrastructure. This initiative, additionally will establish governance for the operation of the infrastructure, establish standard operating procedures, fill specific staffing needs to operate and manage the infrastructure, provide training for the staff, as well as the design, procurement and installation of equipment into the individual jurisdictions. All of this will be designed and installed to support day-to-day exchanges of data, as well as during incident management throughout the NCR.

The NCRIP initiative was launched through 2004 and 2005 UASI grants and is achieving impressive progress in its primary objective to support critical information exchange within the NCR, via secure, reliable and non-contentious government owned and operated mobile and fixed communications networks. Important accomplishments to date include end user requirements gathering, site surveys, technology assessments and design documents. This success has been achieved through direct interactions and data gathering from first responders in the field, commanders, CIOs to the regional leaders for the National Capital Region. This is truly a comprehensive NCR program supported at all levels and will be available for use by all ESFs, in all of the NCR jurisdictions.

Specific accomplishments include the Data Exchange Hub project – which through working partnerships with DHS, DOJ and FEMA, has developed a standards-based Information Exchange Prototype (i.e., a Resource Typing Web Service Search for Emergency Resources in the NCR) that can serve as a model for the rest of the ESFs and the entire country on how to implement the NIEM/GJXDM standards (see standards listed on pg 24 of the DHS UASI grant application guidelines). A comprehensive set of requirements, site surveys and technology assessments for the INETS and the Wireless Broadband infrastructure have been gathered. The preliminary design for both projects has been created with careful evaluation of the available technologies to insure that the region is getting the best value for the money invested. Regional INET connectivity will be achieved in FY2006 and the wireless broadband network will also begin deployment in FY2006.

Reliable, effective data communication between the first responders, emergency responders and eventually all ESF and regional government structures will be enabled through this initiative. The collective scope of the Interconnected Networks (INETs), the Regional Broadband Wireless Network (RWBN) and the Data Exchange Hub (DEH) will have a significant and lasting effect on the region and the nation, as a whole, for many years to come. Through the protection of the nation's capitol, the enabling of the exchange of data wherever-whenever a first responder requires, simply put - meets the inherent purpose of Homeland Security.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The deployed infrastructure will connect and provide coverage to exchange data from fixed and field mobile locations for the entire National Capital Region which covers the geographic areas of the District, Loudoun, Fairfax, Arlington, Prince William Counties and Alexandria City in Virginia, as well as Montgomery and Prince George's counties in Maryland. The project covers more than 2,400 square miles and all population centers within this area.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

Within the NCR, there is a number of highly skilled government technical staff that will be funded through the program and trained on new NCRIP systems and procedures, including web services to support XML database development, and many others, for daily utilization. Additionally, there is significant NCR infrastructure and equipment already in place, such as fiber, microwave dishes, radio towers, IT servers and others, within the counties and cities that will be integrated into this program to ensure optimal interoperability and program cost management. Existing infrastructure and equipment will be integrated, as appropriate, with additional equipment installed to create the final, overarching, comprehensive INETS, RWBN and DEH. Through already established committees and regional working groups, the assets and resources required to support the project will be identified and obtained. Meetings are held on a regular monthly basis to address individual entities' needs within the regional construct. Existing Memorandums of Understanding, Mutual Aid Agreements, as well as Standard Operating Procedures that exist in the counties and cities will be leveraged and brought to a regional level to support this initiative.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

The NCRIP governance structure will be comprehensive and address the operational and organizational requirements in achieving enhanced NCR data sharing. It will require the participation of all municipalities and governments exchanging data over the infrastructure. NCRIP governance is being addressed at both the Regional Programmatic Working Group for Interoperability (RPWGI) executive management level of the program and at the ESF-2 MetroCIO program management level to ensure that comprehensive governance is designed and articulated to regional SPG and CAO managers. NCRIP governance will address security and data needs, equipment ownership and maintenance, as well as management of outages and prioritization of data exchanges during incident management. Additionally, a detailed NCRIP organizational structure will be designed to support executive management, day-to-day operations and fiscal and budgetary requirements and activities. The overall governance structure and organization is essential to the success of the NCRIP and is a top priority of the program.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative, NCRIP, addresses all three national priorities, "Implement the National Incident Management System and National Response Plan, Expanded Regional Collaboration, Implement the

interim National Infrastructure Protection Plan" as well as the priority target capability of "Interoperable Communications". Through the Data Exchange Hub (DEH) the first and third national priorities are addressed. Training has occurred with the region's IT staff to help facilitate the creation of services and data exchanges that comply with the priorities. Through the INETs and Regional Wireless Broadband projects, expanded regional collaboration and incident response and management will be enhanced through communications and data access and sharing capabilities. There will be a reliable, non-commercial means for the area's first responder's to communicate wherever-whenever.

CONCEPT PAPER		January 26, 2006 Robert LeGrande, II Deputy Chief Technology Officer Office of the Chief Technology Officer 441 4th Street, NW Suite 930 S Washington, DC 20001 202-727-2189 direct/202-494-4330 cell	
Project Title:	**First/Critical Responder Credentialing**	**Estimated Grant Amount**	$5.0Million
NCR Strategic Goal Alignment:	Strategic Goal 3: An enduring capability to protect the NCR by preventing or mitigating "all-hazards" threats or events. ▪ Strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness. ▪ resources.	**Allowability**	*Yes*
Estimated Timeline	September '06-December '07(continuous with the activities of the 2004/2005 UASI grant*)*	**Dependencies and Cost Factors:**	To be verified with the SAA office

Problem Statement/Project Description:

Problem:

In response to the general threat of unauthorized access to physical facilities and logical IT assets, the White House issued Homeland Security Presidential Directive (HSPD) 12. The primary objectives of HSPD 12 are the development and deployment of a Federal Government-wide common and reliable identification verification system that will interoperate between all government agencies and serve as the basis for reciprocity between those agencies. The ultimate goal of this directive is to achieve appropriate security assurance for multiple applications by efficiently verifying the claimed identity of individuals seeking physical access to federally controlled government facilities and electronic access to government information systems.

The term "Secure and reliable forms of identification" means identification that (a) is issued based on sound criteria for verifying an individual employee's identity; (b) is strongly resistant to identity fraud, tampering, counterfeiting, and terrorist exploitation; (c) can be rapidly authenticated electronically; and (d) is issued only by providers whose reliability has been established by an official accreditation process. In order to meet the requirements of HSPD 12, the NCR will have to issue specific Policy, procedures and guidance to its employees prior to the eventual implementation.

Project Description:

The NCR's approach to Federated Credentialing is the implementation of core policy, guidance, and procedures to comply with HSPD-12 Control Objectives:

1. Strong, consistent identity proofing processes (sound criteria)
2. Reliable issuance process
3. Rapid electronic verification of identity
4. Tamper resistant
5. This project will culminate in the establishment of the following processes:
    a. Identity Token (ID Card) Application process
    b. Organization's Identity Source Document Verification process
    c. Identity Registration and ID Card Issuance process

Key to this project is the development and sustainability of a compliant system and open architecture to provide interoperability among other agencies.

It is expected that the smart card will have a substantial impact on how agencies conduct their business. Unless the agencies adopting this platform realign their business procedures to take advantage of the economies and opportunities that the platform offers, it is unlikely that anticipated cost reductions from streamlining operations will be realized. Consequently, it is critical that the NCR consider from the very start of their platform planning effort what effects a multi-application card will have on their organizational structure.

At a minimum, the NCR should review the degree to which the multi-application card and card management platform enable the integration of different functions. NCR should contemplate the use of the platform as an employee identification card as well as a physical and logical access control mechanism. When using a single card, NCR should also consider the integration of multiple databases via a centralized **Case Management System** so that the contents of the badging system, physical access control privilege database, and logical access control privilege database can be combined into a single integrated database maintained as part of the card management system. Procedures for issuing cards and access privileges to new employees can be streamlined, allowing the employee to visit one rather than three offices. In the planning process, agencies should consider the work flow to be used for card personalization, issuance, and application loading to evaluate whether there are opportunities for short-cutting these separate processes in the new, integrated environment enabled by the card platform.

Existing PeopleSoft and other EHRP systems can be used as systems-of-record for the purpose of initiating the identification system and ensuring the quality of data. The reuse and integration of existing PeopleSoft applications allows the organization to leverage collected data and coupled with other Relational Database Systems, can yield secure and seamless transfers of data between the Case Management System and the HR system.

The organization's plan for accomplishing the vision for the implementation of smart card services throughout NCR. The plan consists of four key strategic steps to meet the organization's goals for PIV Part I and the migration plan to PIV Part II.

These key strategic steps include the following:

- **Establish partnerships across federal, state and local agencies --** establish the structure for agency-industry decision-making, operations, and management and support interagency partnerships for pilot testing common, core smart card applications.
- **Implement prototype smart card applications --** implement and evaluate pilot test of card applications to serve as prototype for EPA-wide use.
- **Support a uniform operating environment** -- accelerate the establishment of standards and operating rules to support a secure, uniform operating environment and platform for government multi-application smart card systems.
- **Build application management structures** -- implement procedures to support innovation and technological advances

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or CP	Deliverable(s)	Target Date(s)
1. Implement Data Model based on elements in SR	Credentialing program Metro CIO DHS NIMS	xii. Credentialing PKI web service xiii. Enrollment and Revocation web service xiv. Data sharing MOU	Completed by 12/31/07
2. AFIS and Facial recognition integration web service	Credentialing program METRO CIO	xv. Integration with fingerprint, NCIC, mugshot, health practitioner, and other databases xvi. Web and database services xvii. Network Operational support	Completed by 12/31/07
3. fixed and mobile issuance and revocation ability	Credentialing program	• Wireless, fixed, mobile and distributed issuance stations • Sub and special credential stock • LDAP and ADAM special credential • Distributed Access Control and PKI infrastructure	Completed by 12/31/07

Project Performance Measures	Baseline Value	Target Value
1. Credentials issued to NCR	200	7500
2. Integrations to external data sources	1	14
3 access control/logical access services	0	18
4. Redundant and mobile issuance stations	0	25

INITIATIVE PLAN

First/Critical Responder Credentialing

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   National Capital Region First/Critical Responder Credentialing

   The first responder credentialing program creates an integrated, horizontal platform for managing and verifying the identities of first responders, medical practitioners, family assistance recipients, volunteers, and any situation specific group defined by the member jurisdictions of the NCR.

   Utilizing the FIPS 201 framework and PIV I lifecycle activities, the system uses standard data from each jurisdiction's system of record as well as its own identity management system to capture, distribute, and manage contextual identities.

   Credentialing

   The credentialing system makes uses of NIMS and FIPS standards, and data sharing agreements defined as part of the NCRIP Data Exchange Hub

   Outputs will include: physical credentials such as smart cards, rfid cards or other rfid enabled devices (smart tags), photo cards, tokens, passwords, and others

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

   Within the NCR, there is a number of highly skilled government technical staff that will be funded through the program and trained on new NCRIP systems and procedures, including web services to support XML database development, and many others, for daily utilization. Additionally, there is significant NCR infrastructure and equipment already in place, such as fiber, microwave dishes, radio towers, IT servers and others, within the counties and cities that will be integrated into this program to ensure optimal interoperability and program cost management. Existing infrastructure and equipment

will be integrated, as appropriate, with additional equipment installed to create the final, overarching, comprehensive INETS, RWBN and DEH. Through already established committees and regional working groups, the assets and resources required to support the project will be identified and obtained. Meetings are held on a regular monthly basis to address individual entities' needs within the regional construct. Existing Memorandums of Understanding, Mutual Aid Agreements, as well as Standard Operating Procedures that exist in the counties and cities will be leveraged and brought to a regional level to support this initiative.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

The NCRIP governance structure will be comprehensive and address the operational and organizational requirements in achieving enhanced NCR data sharing. It will require the participation of all municipalities and governments exchanging data over the infrastructure. NCRIP governance is being addressed at both the Regional Programmatic Working Group for Interoperability (RPWGI) executive management level of the program and at the ESF-2 MetroCIO program management level to ensure that comprehensive governance is designed and articulated to regional SPG and CAO managers. NCRIP governance will address security and data needs, equipment ownership and maintenance, as well as management of outages and prioritization of data exchanges during incident management. Additionally, a detailed NCRIP organizational structure will be designed to support executive management, day-to-day operations and fiscal and budgetary requirements and activities. The overall governance structure and organization is essential to the success of the NCRIP and is a top priority of the program.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative, NCRIP, addresses all three national priorities, "Implement the National Incident Management System and National Response Plan, Expanded Regional Collaboration, Implement the interim National Infrastructure Protection Plan" as well as the priority target capability of "Interoperable Communications". Through the Data Exchange Hub (DEH) the first and third national priorities are addressed. Training has occurred with the region's IT staff to help facilitate the creation of services and data exchanges that comply with the priorities. Through the INETs and Regional Wireless Broadband projects, expanded regional collaboration and incident response and management will be enhanced through communications and data access and sharing capabilities. There will be a reliable, non-commercial means for the area's first responder's to communicate wherever-whenever.

CONCEPT PAPER: ESF-2

Preliminary Document –
Presented for Review and Discussion

January 27, 2006

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Project Title:	**National Capital Region Base MAP (NCRBM) – Regional GIS Base Map Development and Maintenance**	**Estimated Grant Amount**	*$1,000,000*
NCR Strategic Goal Alignment:	The regional GIS data and resulting maps and products are a component of and aligns with all four NCR Strategic Goals.: Strategic Goal 1: A collaborative culture for planning, decision-making, and implementation across the NCR. • Enhance and continually adapt the framework for regional strategic planning and decision-making to achieve an optimal balance of capabilities across the NCR. Strategic Goal 2: An informed and prepared community of those who live, work, and visit within the region, engaged in the safety and security of the NCR. • Deliver timely, coordinated and targeted emergency information across the NCR before, during, and after emergencies Strategic Goal 3: An enduring capability to protect the NCR by preventing or mitigating "all-hazards" threats or events. • Strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness. Strategic Goal 4: A sustained capacity to respond to and recover from "all-hazards" threats or events across the NCR. • Ensure the capacity to operate multi-level coordinated response and recovery. • Ensure adequate and effective sharing of resources	**Allowability**	*Yes*
Estimated Timeline	5/01/2006-11/30/2007	**Dependencies and Cost Factors:**	

Problem Statement:
Geospatial data and applications support a broad range of Emergency Support Functions (ESFs). Combining spatial data from multiple ESFs serving multiple jurisdictions on a common map is essential to understanding and responding to large scale events. Currently the NCR does not have the ability to display and use a common, standard, regional GIS map in an emergency response. The Data Exchange Hub (a core component of the National Capital Region Interoperability Program for Data Exchange – NCRIP DEH) will provide the technical capability to distribute the GIS data regionally. However, the data necessary to create the regional maps is not sufficiently complete, standardized or comprehensive. Additionally, the GIS web services necessary to serve the data are not complete or standardized. Without a standard, up to date (maintained) map and data, regional interoperability will be severely impacted and the DEH will not be able to deliver the critically important GIS data.

Project Description:
The GIS Managers' Committee and its two subcommittees (Data and Technology) are responsible for providing, maintaining and serving data and applications that will support a regional base map, (see attached copy of the committee goals for the Geospatial Interoperability Project Phase 1 in the Initiative Paper).

The committee has established an initial minimum essential data set and collected data about that set (metadata) from some of the committee members. This initial work has identified significant limitations in the data, such as it does not list the necessary attributes necessary in an NCR emergency response. The initial list of data categories has not been cross-checked with the ESFs to ensure that their data categories and the related data elements necessary for regional response are identified and maintained locally. The identified data sets need to be evaluated in terms of consistency across the region, the maintenance status at each locality, and priority for inclusion in the DEH regional GIS map.

The MED is only a starting point for building a regionally consistent, locally maintained GIS data set to serve via the DEH. Determining the Essential Data (ED) set is also critical, it will require analysis of the end user requirements documents from the a sister project the NCRIP AIGA and follow up with COG/NCR members to verify the need and then determine the availability and accuracy of those data. Additional means used to inform the content and structure of the ED include; the Homeland Security Information Protection Tiger Team Report and the NSDI Stewardship program under GIS for the Nation's Project Bluebook. The source of the data for the ED is also critical, commercial data sets exist for the region (e.g., centerlines) that could provide some of the data, but they will need to be carefully evaluated prior to implementation.
These in-depth analyses will identify the data and data maintenance gaps for each COG/NCR member. Subsequently, providing assistance to those localities to initially complete those data sets, and then establishing business processes to regularly maintain them will ensure accurate, up-to-date GIS data for real-time response.
The NCR requirement includes a geospatial metadata clearing house compatible with federal efforts such as the Geospatial One Stop. Maryland's Emergency Geographic Information Network (MEGIN), an ITEP funded program, may be a candidate to provide this, but will need to be evaluated.

Aerial imagery will be a vital component of the regional GIS base map. There are varied sets of these data available. The optimum source for that aerial imagery needs to be determined and the method for serving it to the NCR via the DEH needs to be decided as well. Furthermore, as Katrina has shown, there needs to be a mechanism in place to update that imagery after a regional emergency. Thus, there is a need to identify contract vehicles or MOUs (possibly with Federal data providers such as DHS, USGA, and or NGA) that will enable quick acquisition of imagery. A distribution approach also needs to be determined and implemented.

Once the NCR Base Map is defined and created, distribution to the region becomes critical. This project will determine how to best make the GIS data available to the region's applications for consumption. It will include delivery to Web Services as well as end user applications such as WebEOC and the DEH. These web services need to be determined and then prioritized for implementation. In the first year the initial services will be created. Additions will be in subsequent years. Analysis must also be conducted on how best to consume (display) the regional map in the end-user applications. There are multiple options available which must be reviewed to determine adequacy of their functionality in delivering the regional map. Finally, load testing of the GIS web services must be conducted since there is potential for processing large amounts of data quickly which could significantly impact response time of the systems.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date
1. Minimum Essential Data Set Analysis	COG GIS Managers, GIS Data Subcommittee members, ESF-2	• Data set and Attribute Definitions • Maintenance Status of attributes in NCR members • Level of effort to complete the MED by member	12/1/2006 12/1/2006 12/1/2006
2. Essential Data Set Determination	COG GIS Managers, GIS Data Subcommittee members, ESF-2	• Candidate data for the Essential Data set, including attributes • Maintenance Stats of Attribute sin NCR members • Level of effort to complete the ED by member	3/1/2007 3/1/2007 3/1/2007
3. Complete MED for NCR	COG GIS Managers, GIS Data Subcommittee members, ESF- 2	Based on prior deliverables assist NCR members in completing the MED	12/01/2007
4. Aerial Imagery Availability Analysis	COG GIS Managers, GIS Data Committee members, ESF- 2	• Aerial Image data sets available to DEH • Metadata for those data sets • Update cycle for each data set.	1/15/2007 1/15/2007 1/15/2007
5. Aerial Imagery Acquisition	COG GIS Managers, GIS Data Subcommittee members, ESF- 2	• Options for acquisition of Aerial imagery promptly after an incident • Analysis of approaches to acquire the imagery quickly	9/1/2006 9/1/2006
6. Spatial Web Services	COG GIS Managers, GIS Data Subcommittee members, ESF- 2	• Candidate list of spatial web services for DEH	3/1/2007
7. Security	COG GIS Managers, GIS	• Analysis of security (access) requirements for	2/1/2007

Analysis	Technical Sub-committee members, ESF- 2	MED and ED • Establishment and verification of DEH security protocols to protect spatial data.	2/1/2007
8. Load Testing	COG GIS Managers, GIS Tech. Subcommittee members, ESF- 2	Test bandwidth and processor demands of the DEH web services.	5/1/2007
9. Metadata clearing house	COG GIS Managers, GIS Data Subcommittee members, ESF- 2	• Analysis of Implementation Options • Implement Clearinghouse	6/1/2007
10. Compatibility Testing	Subcommittee Members and vendors	WebEOC, OGC, GOS, ESRI,	9/1/2007

Project Performance Measures	Baseline Value	Target Value
1. MED Analysis	0	1
2. Essential Data Set Analysis	0	1
3. Complete MED for NCR	0	19
4. Aerial Imagery Availability Analysis	0	1
5. Aerial Imagery Acquisition/Serving Options	0	1
6. Candidates & Standards for Spatial Web Services	0	1
7. Security Analysis	0	1

INITIATIVE PLAN

NCR Base Map: Expanded Regional Cooperation/Strengthen Interoperable Communications

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

National Capital Region Base Map – Regional GIS Base Map Development and Maintenance. Comprehensive data exchange for all Emergency Support Functions (ESFs) within the NCR is a priority requirement and objective of the NCRIP. The Data Exchange Hub is one of the initial projects to fulfill this objective, providing the standards and infrastructure for sharing local data regionally. One foundational component of the National Capital Region Interoperability Program for Data Exchange is the Regional Base Map (RBM) and related GIS data. This map will be served in real-time via the Data Exchange Hub (DEH) to the Emergency Support Functions whenever needed, whether for prevention, protection, response or recovery. Because the map will be generated on the fly from local, maintained data, it will provide the most accurate, up-to-date GIS information available. This initiative will ensure the ability to deliver a consistent, accurate, and up-to-date Regional Base Map to the DEH.

GIS Data is important to most of the Region's ESFs as shown by the results of the Application Gap Inventory Analysis. The GIS Maps help view, define and understand the situation. In many of the NCR members, GIS is already being used day-to-day in regular operations across the ESFs. Regional interaction will also require GIS maps and data to efficiently and effectively respond and manage regional disasters.

Developing the local data necessary data to provide the regional map requires careful analysis of needs, determining how best to meet them, and then implementing the solutions. Not only data will

need to be evaluated, collected and standardized, but also the web services that deliver the data and the web clients that will display (consume) will need to be identified, standardized and constructed. In addition to the DEH, a key client will be WebEOC which has become a regional tool for emergency response. Finally, security of the data needs to be protected since different sets of GIS data have differing security restrictions. GIS needs to be involved in the security design and implementation. This is a multi year effort in order to carry out the analysis, planning and implantation. Data in particular is the foundational component, yet takes the most time due since it must be structured then collected for over 3,200 sq. miles that comprise COG.

In the first year, the focus is on establishing a validated set of data layers and data elements. An initial minimum essential data set has been determined but needs to be expanded to a more comprehensive set of data – an Essential Data (ED) set validated with HSIP tiger team data, Project Blue Book and other efforts that may be worthwhile. Aerial imagery must by evaluated and made available to the NCR as well. Once these data sets are established, work can begin on obtaining and completing them regionally.

Also in the first year, links to WebEOC must be established. An initial set of web services must be defined and constructed to supply both WebEOC and the DEH.

Finally, load testing must be conducted and security concerns resolved before the data can be served in a production environment.

In the second year, data collection and maintenance will continue and increase in importance as the NCR Essential Data set grows. Additional data needs will be identified and added to the growing list of data elements to be obtained.

Web service development will continue in year two after the initial wet of web services are deployed.

Year three will continue the data and web service work of year two. By the end of year three the data should be in a maintenance mode and web services should be fairly stable.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The regional coverage will include that of the NCRIP - the entire National Capital Region which covers the geographic areas of the District, Loudoun, Fairfax, Arlington, Prince William Counties and Alexandria City in Virginia, as well as Montgomery and Prince George's counties in Maryland. The project covers more than 2,400 square miles and all population centers within this area. Additional members from COG will also be involved.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

This initiative is focused on the GIS data and services and will integrate tightly with the infrastructure for the DEH. The GIS committee is in place and meeting regularly along with its subcommittees. The GIS committee reports directly to the CIOs and will be responsible for this initiative. Experienced GIS staff is available at the larger organizations and many of the smaller to participate in the initiative. There is also a wide range of GIS data available in each of the organizations that will help accelerate the initiative. This initiative will fund contractor support to standardize and complete

the Regional Base Map and to work with the committee members to develop business processes to ensure regular maintenance of the Regional GIS Base Map and other GIS data. Additional MOUs may need to be developed to ensure acquisition and availability of the data. It may also be used to purchase commercial data for the region.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

The NCRIP governance structure will be comprehensive and address the operational and organizational requirements in achieving enhanced NCR data sharing. It will require the participation of all municipalities and governments exchanging data over the infrastructure. NCRIP governance is being addressed at both the Regional Programmatic Working Group for Interoperability (RPWGI) executive management level of the program and at the ESF-2 MetroCIO program management level to ensure that comprehensive governance is designed and articulated to regional SPG and CAO managers. NCRIP governance will address security and data needs, and equipment ownership and maintenance, as well as management of outages and prioritization of data exchanges during incident management. Additionally, a detailed NCRIP organizational structure will be designed to support executive management, day-to-day operations and fiscal and budgetary requirements and activities.

As part of planning and implementing the DEH, the COG CIOs established a GIS committee that was charged with providing regional and federal emergency managers the best geospatial data available irrespective of the data's jurisdiction of origin. The GIS Committee, comprised of the NCR GIS managers, established both data and technical subcommittees to help meet the Committee's mission. That committee is directly responsible for the success of this project.
The overall governance structure and organization is essential to the success of the NCRIP and is a top priority of the program.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative, NCRIP Regional Base Map Development and Maintenance, addresses four national priorities, "Implement the National Incident Management System and National Response Plan; Expanded Regional Collaboration; Strengthen Information Sharing and Collaboration Capabilities; Strengthen Interoperable Communication Capabilities". Training has occurred with the region's IT staff and GIS staff to help facilitate the creation of services and data exchanges that comply with the priorities.

CONCEPT PAPER ***Preliminary Document – Presented for Review and Discussion***		December 30, 2005 TrafficLand Inc. 11208 Waples Mill Road Suite 109 Fairfax, Virginia 22030 Bill Knost Director of First Responder Programs 703-591-1933 bknost@trafficland.com	
Project Title:	**Emergency Video Information Sharing Network - EVISN**	**Estimated Grant Amount**	$950,000 2 years service and support Contract vehicle in-place with Commonwealth of Virginia
NCR Strategic Goal Alignment:	Strategic Goal 2: Informed and Prepared Community Objective 1: Deliver Timely, Coordinated Information Before, During and After Emergencies	**Allowability**	No equipment purchase Service provision only
Estimated Timeline	Service available 90 days from Notice to Proceed. Service available for initial two-year period.	**Dependencies and Cost Factors:**	None.

Problem Statement/Project Description:

The existing National Capitol Region Internet-based roadway condition information sources are currently not scalable to adjust for user traffic generated during a major regional emergency or evacuation. This scenario was recently proven in Houston, TX during Hurricane Rita and Katrina (http://www.houstontranstar.org/). Existing DOT hosted websites "crashed" due to the inadequate capability of their networks to increase total throughput under an increased load. This presented a void in the ability to assess ground truth and effectively manage the area roadways and resulting incedents.

In the National Capital Region, TrafficLand Inc. is the sole internet based source for integrated highway monitoring video from the four primary transportation operating agencies in the region (VDOT, MSHA,, MCTMC,DDOT). In its current state, the TrafficLand public website's server capacity (www.trafficland.com) can accommodate users under routine and even high volume conditions (snipers, presidential inauguration, etc.) The TrafficLand website is not, however, capable of delivering imagery of the region's highways in times of severe regional emergency or evacuation conditions when anticipated user traffic will increase dramatically. To accommodate this anticipated need we propose to develop the:

Emergency Video Information Sharing Network or "EVISN."

This proposal is put forward to provide the residents of the National Capital Region with assured access to the region's 400+ highway monitoring cameras in times of severe regional emergency or evacuation conditions through the development of EVISN, (provision of additional video server capacity, guaranteed Internet bandwidth at TrafficLand's data center and integration of NCR area regional preparedness information and hot links). This emergency interface will highlight the existing NCR evacuation routes and allow the public to access the imagery associated with these routes. Having this valuable resource available in times of emergency will dramatically increase the effectiveness and efficiencies of area first responders. Both mobile and desktop access will be provided.

In addition, through this EVISN proposal, TrafficLand will link the dozens of local, state and federal emergency management websites into a single location to improve regional preparedness and information dissemination in times of emergency.

Providing the public with reliable, real time video information on roadway conditions during regional "all hazards" emergency or evacuation conditions will help manage highway utilization, resulting in more orderly evacuations or reinforcing "Shelter in Place" announcements. Additionally, the EVISN website will act as an educational/awareness mechanism to inform the NCR public of proper actions in times of emergency.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
1. Develop User Interface	TrafficLand, VDEM,, MEMA, DDHS &	EVISN user interface for Trafficland.com website	45 days from NTP
2. Integrate Regional Emergency Management Information	TrafficLand, VDEM, MEMA, DDHS	Integrate existing emergency management information links into EVISN user interface	60 days from NTP
3. Initiate EVISN Service	TrafficLand	Provide EVISN web site to public via Trafficland.com website Integrate EVISN user interface into other public and private web sites (i.e. WTOP Radio, WashingtonPost.com, VDEM, MEMA, DDHS)	90 days from NTP
4. Fortify Network capacity	TrafficLand	Provision of additional video servers and guaranteed Internet bandwidth at TrafficLand's data center in Ashburn, Virginia	90 days from NTP
5. VDS accounts	TrafficLand	Supply Video Distribution System to VDEM,MEMA,DDHS offices	90 days from NTP
6. Mobile Video Accounts	TrafficLand	Supply 10 mobile video accounts each to VDEM,MEMA,DDHS offices	90 days from NTP

Project Performance Measures	Baseline Value	Target Value
1. Develop baseline monthly usage rates for existing emergency management web sites	Develop baseline	
2. Measure monthly usage rates of EVISN web site and existing emergency management web sites		Measure increase in usage/ information dissemination

Project Plan: The development, implementation and operation of the EVISN Web Portal will be accomplished within 90 days from Notice to Proceed.

INITIATIVE PLAN

Emergency Video Information Sharing Network – EVISN

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

*****This Initiative is entitled Emergency Video Information Sharing Network or "EVISN". The TrafficLand internet based web site is the sole source to the NCR of integrated roadway traffic cameras from the regions four major Transportation Agencies in Virginia, Maryland, and the District of Columbia. Being able to deliver this real time video of roadway conditions, and providing active links to Federal, State and Local Agencies fits Strategic Goal #2 (Informed and Prepared Community) to help mitigate an "all hazards" type emergency. This Initiative meets two of the common target capabilities. First the priority capability of Interoperable Communications by which live video, with links to and from multiple agencies is distributed to all of the jurisdictions and citizens across the NCR. The second common target capability of Citizen Preparedness and Participation is also met by the ability to view the real time roadway conditions. Additionally, two target respond capabilities are met. The Emergency Public Information and Warning capability by the active links to the NCR Federal, State, and Local Government web sites, and Citizen Protection: Evacuation or In Place protection capability by the ability to view the real time video images and access the active multi agency links providing additional and updating critical citizen information.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

*This Initiative covers the entire geographical area of the NCR having existing traffic roadway camera coverage. Currently, there are over 400 cameras in the network providing coverage through out Washington D.C., Northern Virginia (Fairfax County) around Rt.495, on I95 south (Prince William County) to Dumfries, and west on Rt.66 to Manassas. In Maryland, around Rt. 495 (Prince Georges and Montgomery County), east to the Chesapeake Bay Bridge on Rt.50. and north through most of Montgomery County, Rockville and Gaithersburg.

There are over 100 additional cameras in those jurisdictions, including the City of Fairfax, and new cameras from the City of Alexandria, City of Falls Church, and Town of Vienna are anticipated to be a part of the network within the next 12-18 months.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

- The TrafficLand public website has been operational since September 2001.The company has made a substantial investment in building the existing infrastructure of hardware, servers, encoders, telecommunications, and acquiring the agreements with the participating Transportation Agencies to obtain and distribute the video across the NCR. Events from the recent hurricane season have shown that if a regional "all hazards" emergency were to occur in the NCR, the volume of citizen traffic to the TrafficLand website would compromise the level of service to the

citizens of the NCR. This was demonstrated when the Houston, Texas "Transtar" website crashed under heavy internet use during the Hurricane Rita evacuation.

- The TrafficLand network is the sole source for integrated traffic video in the NCR. Currently serving approximately 3 million views per month. However, during an "all hazards" emergency, the network should be fortified by the addition of servers, video encoders, and telecommunications bandwidth to handle the anticipated increased volume of up to 720,000 unique users per hour.
- All existing agreements and operational protocols with the Transportation Agencies would remain in place. Additional agreements and software integration may be required with the Federal, State, and Local Governments to facilitate a seamless information link.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

*The core function of this Initiative is already in place with existing agreements between TrafficLand and the various NCR multi jurisdictional and multi discipline partners. In addition, there is a funding mechanism in place with the Commonwealth of Virginia.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

- TrafficLand has expanded regional collaboration in the NCR by virtue of forming partnerships with the major Transportation agencies in Virginia, Maryland, and the District of Columbia. That partnership has resulted in an integrated network of traffic cameras providing the citizens the ability to view the roadway infrastructure in one internet based video application.
- This public private partnership has also formed a strong regional collaboration between multi jurisdictional State and Local law Enforcement and Emergency Management Agencies. In addition, other multi discipline partners, such as the major news media like the Washington Post and WTOP utilize this application to broadcast real time traffic roadway conditions. The largest mass transit organization in the NCR, WMATA, is also a partner in the collaboration.
- Interoperable Communications is described as the ability to provide an uninterrupted flow of critical information among responding multi disciplinary and multi jurisdictional agencies at all levels of government before, during, and after an event as being a capability specific priority. Critical information is further described as voice and data. The video data provided to the citizens, in addition to the links to the various jurisdictions Emergency Management offices in this Initiative should be viewed as a necessary and positive step to strengthen the Interoperability Communications Capability in the NCR.

CONCEPT PAPER ***Preliminary Document – Presented for Review and Discussion***		December 21, 2005 Wayne McBride, Deputy Director, Prince George's County PSC Prince George's County Office of Homeland Security; 7911 Anchor Street, Landover, MD 20785; 301-499-8100, wmcbride@co.pg.md.us	
Project Title:	**Prince George's County Interoperable Radio Communications System**	**Estimated Grant Amount**	Current estimates call for a radio system that will cost approximately $75million
NCR Strategic Goal Alignment:	Radio Interoperability ESF 2	**Allow ability**	Radio Interoperability ESF 2
Estimated Timeline	Start: January 23, 2006 – RFQ due Estimated End Date: Fall 2008	**Dependencies and Cost Factors:**	Availability of tower real estate and funding

Problem Statement/Project Description:

Prince George's County, Maryland is located in the heart of the Baltimore/Washington corridor. The county boarders Washington, DC and is just 37 miles south of the City of Baltimore. The County's population exceeds 820,000 with a daily work population of well over one million. Covering an area of close to 500 square miles, the County is home to many businesses, as well as state and federal agencies. Some of the Federal agencies include NASA's Goddard Space Flight Center, Andrew's Air Force Base, several Smithsonian support centers, the Census Bureau, U.S. Department of Agriculture's Beltsville facility, a Federal Records Center, and a large Internal Revenue Service office complex. It is also home to the University of Maryland and Bowie State University and the Washington Redskins. The Washington Redskin's FedEx Field stadium holds a game-day population that exceeds 100,000 fans. Additionally, a large portion of the region's Metro transit system, AMTRAK lines, the Capitol Beltway and Interstate 95 pass through Prince George's County.

This proximity to the Nation's Capitol and the need to support many critical federal agencies requires the ability for our first responders to effectively communicate with each other and with the regional partners. While the current communications system of Prince George's County offers virtually no interoperability for regional partners or County first responders, new radio system specifications have been crafted with a focus on intra and inter County interoperability. To support the regional requirements for first responder interoperability, the County's proposed radio system is based upon a state-of-the-art digital trunked system employing the nationwide P-25 interoperability standard adopted by the U.S. Department of Homeland Security. Prince George's County is requesting funding to support the acquisition of a new communications system that may cost as much as $75,000,000.

For most communities in America, the threat of terrorism remains just that; a threat. Only two areas of the United States have experienced the sting of terrorism and experientially understand the need to support first responder emergency communications interoperability. Along with other Washington DC area first responders, Prince George's County experienced the impact of terrorism on September 11, 2001 when Fire/EMS personnel were dispatched to the Pentagon. The impact of an attack on a target located in the County could have impact upon the world, the nation, or the region, depending upon the event. A missile fired at a world leader's airplane landing or departing from Andrews Air Force base could result in an impact felt throughout the world. An attack on the NASA complex in Greenbelt could impact the nation's defense. A major disruption in rail service on the main north-south CSX/AMTRAK track and/or Interstate 95 running through the County could impact the economy of the region. With the plethora of vital federal, state, and local infrastructure located in Prince George's County, the impact of terrorism would easily ripple throughout the region and in all probability, the country.

The County's lack of interoperability represents a direct threat to the region as the ability of the National Capitol Area emergency response personnel to respond to a critical event is reduced by a lack of command and control communications. Since the terrorist attack of September 11, 2001 in which the County dispatched emergency resources to the Pentagon, there has been no improvement in the ability of Prince George's first responders to interoperate with other regional first responders.

The Washington area jurisdictions have developed regional interoperability fixes to include a cache of "disaster" radios maintained in Montgomery County, Fairfax County, and the District of Columbia. These radios are programmed to operate on the frequencies of the (Motorola) 800 MHz systems used throughout the region. Even if brought to Prince George's County, these radios cannot operate unless their signal is of sufficient strength to reach the network infrastructure of one of the surrounding jurisdictions and that government allocates a "talk-group" to support the users. This suggests that unless the

radios are used in an area proximate to the border of the District of Columbia, Fairfax County, or Montgomery County, the radios are likely to be of no use to Prince George's in the management of the emergency. To support the regional requirements for first responder interoperability, the County's proposed radio system is based upon a digital trunked system employing the nationwide P-25 interoperability standard adopted by the U.S. Department of Homeland Security. The implementation of this new radio system will resolve the County's lack of an interoperable first responder radio system and complete the regional communications network with an overall interoperable communications infrastructure. Prince George's County anticipates that the competitive procurement process will allow the County to acquire a state-of-the-art communications system at an optimal cost. At present, the estimated cost for Prince George's County's radio system interoperability solution is $75,000,000. An aggressive schedule has been established, with testing to begin in the spring of 2008, with a completion date in early 2009.

Conclusion: Like virtually every local government in the United States, Prince George's County faces financial challenges. However, unlike all governments, the County requires a comprehensive and highly expensive new digital trunked land mobile radio communications system to meet the interoperability challenges faced by all of the jurisdictions in the COG. Many of the threat targets in Prince George's relate to our national government and require the expenditure of extraordinary dollars to meet the challenge. Financial assistance from the DHS is both appropriate and needed if the County is going to acquire a system that supports all of the first responders of the region in defending or reacting to threats against portions of vital national and regional infrastructure.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
1. Radio Consultant	RCC/Prince George's Co.	Consulting Services	2005 to conclusion
2. Selection of vendor	RCC/Prince George's Co.	RFP and specification	March 2006
3. Contract Execution	RCC/Selected vendor & County	Radio System	August 2006
4. Plan Implementation	RCC/Selected vendor & County	Radio System	September 2006 to June 2008
5. System Acceptance	RCC/Selected vendor & County	Radio System	June 2008 to September 2008

Project Performance Measures	Baseline Value	Target Value
1. Completed Needs Assessment Report	$150,000	$150,000
2. Completed Specification Document	$200,000	$200,000
3. Completed Contract	$40,000	$40,000
4. Completed System Acceptance	$75,000,000	$75,000,000

INITIATIVE PLAN

Prince George's County Interoperable Radio Communications System

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   Name of Initiative: Prince George's County Interoperable Radio Communications System

   Prince George's County's proximity to the Nation's Capitol and the need to support many critical federal agencies requires the ability for our first responders to effectively communicate with each other and with the regional partners. While the current communications system of Prince George's County offers virtually no interoperability for regional partners or County first responders, new radio system specifications have been crafted with a focus on intra and inter County interoperability. To support the regional requirements for first responder interoperability, the County's proposed radio system is based upon a state-of-the-art digital trunked system employing the nationwide P-25 interoperability standard adopted by the U.S. Department of Homeland Security.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   Prince George's County, Maryland is located in the heart of the Baltimore/Washington corridor. The county boarders Washington, DC and is just 37 miles south of the City of Baltimore. The County's population exceeds 820,000 with a daily work population of well over one million. Covering an area of close to 500 square miles, the County is home to many businesses, as well as state and federal agencies. Some of the Federal agencies include NASA's Goddard Space Flight Center, Andrew's Air Force Base, several Smithsonian support centers, the Census Bureau, U.S. Department of Agriculture's Beltsville facility, a Federal Records Center, and a large Internal Revenue Service office complex. It is also home to the University of Maryland and Bowie State University and the Washington Redskins. The Washington Redskin's FedEx Field stadium holds a game-day population that exceeds 100,000 fans. Additionally, a large portion of the region's Metro transit system, AMTRAK lines, the Capitol Beltway and Interstate 95 pass through Prince George's County.

   The impact of an attack on a target located in the County could have impact upon the world, the nation, or the region, depending upon the event. A missile fired at a world leader's airplane landing or departing from Andrews Air Force base could result in an impact felt throughout the world. An attack on the NASA complex in Greenbelt could impact the nation's defense. A major disruption in rail service on the main north-south CSX/AMTRAK track and/or Interstate 95 running through the County could impact the economy of the region. With the plethora of vital federal, state, and local infrastructure located in Prince George's County, the impact of terrorism would easily ripple throughout the region and in all probability, the country.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

In an attempt to support the regional communications capabilities, the County is going through a comprehensive series of steps designed to produce a contemporary state-of-the-art radio system that will support both the County as well as the region for many years into the future. There are a host of issues that impact the development of a modern land mobile radio system. Below is a partial list of major issues and strategies for resolution that the County has (or is) addressed (addressing) to ensure that the new system meets not only the needs of Prince George's County, but the Council of Governments regional requirements as well.

Issue: The most fundamental limitation of the County is a lack of radio frequencies in the 800 MHz band that is used throughout the region. Although the County is licensed for thirteen (13) pair of 800 MHz frequencies, virtually every channel faces serious technical limitations because of other users either on the exact frequency or an adjacent channel that is too close to Prince George's, rendering the channels useless.
Resolution: To remedy this limitation, Prince George's County is supporting Region 20's Technical Committee to develop the 700 MHz Plan required by the Federal Communications Commission (FCC). Through the County's communications' consultant, a draft plan for the Region has been produced and transmitted to the Technical Committee for review. Once approved by the FCC, Prince George's County will employ frequencies in the 700 MHz band for its new radio system. All members of the region will have 700 MHz frequencies through this work.

Issue: There are emerging radio standards impacting land mobile radio throughout the United States. Almost all of the Washington Area jurisdictions use an older version of Motorola's software as the basis of the radio's operating system that is no longer sold for new systems. For interoperability with these legacy systems, one must utilize Motorola or Motorola-compatible radios for communications. There are few Motorola-compatible radios sold today (by anyone other than Motorola) and almost none of these are designed for public safety use. Prince George's County cannot purchase the older Motorola technology used throughout the region as the company no longer offers it for sale.

Resolution: To permit regional interoperability with the County's communications system, Prince George's is contemplating the acquisition of a modern "standards-based" P-25 land mobile radio system. This P-25 standard has been adopted by the Department of Homeland Security as the preferred standard for communications interoperability. In the coming years, it is likely that all first responder radios in the Washington DC area as well as United States will contain P-25 software. Today, few of the radios used throughout the region can operate on this new standard. However, through software upgrades to many newer existing devices, Motorola mobile and portable radios used throughout the region should be able to interoperate with the Prince George's County communications infrastructure effectively filling the gap in regional radio coverage. The general cost of the software upgrade is approximately $300 per device.

Issue: There has been a lack of interoperability at the communications system network level for many years. As an example, Motorola networks could not receive M/A-COM radios necessitating the acquisition of all components from a single radio vendor.

Resolution: Prince George's County is contemplating a contemporary strategy relative to the acquisition of network components as well as mobile and portable radios. To ensure that the County's first responders can communicate with the surrounding jurisdictions using Motorola legacy systems, Motorola mobile and portable radios with P-25 software may be purchased from the existing State of Maryland contract. Conversely, the fixed network equipment of the County may be purchased

through a competitive procurement permitting a variety of manufacturers to provide proposals based upon the P-25 standard. The County anticipates that the competitive procurement will permit it to acquire a state-of-the-art communications system at an optimal cost. No other jurisdiction within the Washington Area has been able to competitively procure a communications system as P-25 standard systems have only become available in (calendar year) 2005. Through software upgrades to most existing devices, Motorola mobile and portable radios used throughout the region should be able to interoperate with the Prince George's County communications infrastructure, effectively filling the gap in regional radio coverage.

To support the regional requirements for first responder interoperability, the County's proposed radio system is based upon a digital trunked system employing the nationwide P-25 interoperability standard adopted by the U.S. Department of Homeland Security. The implementation of this new radio system will resolve the County's lack of an interoperable first responder radio system and complete the regional communications network with an overall interoperable communications infrastructure.

Prince George's County anticipates that the competitive procurement process will allow the County to acquire a state-of-the-art communications system at an optimal cost. At present, the estimated cost for Prince George's County's radio system interoperability solution is $75,000,000. Financial assistance from the DHS is both appropriate and needed if the County is going to acquire a system that supports all of the first responders of the region in defending or reacting to threats against portions of vital national and regional infrastructure.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Prince George's County is committed to address and resolve the challenges of our radio system. Recent grant funding opportunities for Prince George's County have been dedicated to enhanced radio system resources to include hiring a radio system consultant. This consultant will evaluate all areas of the County's radio system needs, review and validate existing proposals, provide recommendations for radio system enhancements and resolution of interoperability issues, as well as providing a strategic path for the County's future radio system efforts.

The County Executive, the County Council, the Chief Administrative Officer and the Deputy Chief Administrative Officer for Public Safety/Director of Homeland Security are dedicated to the successful development and implementation of an interoperable radio communication system in Prince George's County. The dedication provided to these efforts is the highest priority of the Office of Homeland Security and the project management team in Public Safety Communications.

Like virtually every local government in the United States, Prince George's County faces financial challenges. However, unlike all governments, the County requires a comprehensive and highly expensive new digital trunked land mobile radio communications system to meet the interoperability challenges faced by all of the jurisdictions in the COG. Many of the threat targets in Prince George's relate to our national government and require the expenditure of extraordinary dollars to meet the challenge. Financial assistance from the DHS is both appropriate and needed if the County is going to acquire a system that supports all of the first responders of the region in defending or reacting to threats against portions of vital national and regional infrastructure.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

Only through a regional and redundant land mobile radio communications strategy could the multiple jurisdictions in the Washington Metropolitan Area effectively gain command and control of the event. These regional radio communication systems must be capable of providing some level of long-term radio network support for the region after a natural disaster, catastrophic event, or a tanker overturned on the beltway or an incident similar to the Sniper attacks. Today, Prince George's County is the weak link in that type of regional communications system.

With respect to interoperability, there is only a very limited capacity for the County's first responders to interoperate with each other and are unable to have interoperable communications with the region during major events. This causes first responders to maintain segregated and uncoordinated communications even when events require the coordinated actions of law enforcement with fire/EMS personnel.

The Washington area jurisdictions have developed regional interoperability fixes to include a cache of "disaster" radios maintained in Montgomery County, Fairfax County, and the District of Columbia. These radios are programmed to operate on the frequencies of the (Motorola) 800 MHz systems used throughout the region. Even if brought to Prince George's County, these radios cannot operate unless their signal is of sufficient strength to reach the network infrastructure of one of the surrounding jurisdictions and that government allocates a "talk-group" to support the users. This suggests that unless the radios are used in an area proximate to the border of the District of Columbia, Fairfax County, or Montgomery County, the radios are likely to be of no use to Prince George's in the management of the emergency.

CONCEPT PAPER ***Preliminary Document – Presented for Review and Discussion***		1/24/06 Montgomery County, Homeland Security Department Miguel Ascarrunz (240) 777-2323	
Project Title:	**Alternate Public Safety Communications Center (APSCC)**	**Estimated Grant Amount**	$2.5 million
NCR Strategic Goal Alignment:	Strategic Goal 4: A sustained capacity to respond to and recover from "all-hazards" events across the NCR.	**Allowability**	Emergency Management RESF-5
Estimated Timeline	May 2006 – December 2007	**Dependencies and Cost Factors:**	[Attach via separate sheet if necessary]

Problem Statement/Project Description:

The Montgomery County Alternate Public Safety Communications Center (APSCC) was built out around the shell of the old Emergency Communication Center. Most of the items needed to fully operate the Center in a backup capacity (70% of PSCC) were funded and are either operational or near to being operational. This item provides the necessary security and the remaining foundation equipment for the APSCC. Missing items to provide for security and access capabilities are cameras, card readers for the operational floors, and door releases. Missing foundation equipment includes items such as but not limited to: Office Equipment (Copiers, Faxes), Headsets for phones/radio, Cabling (Cable TV, LAN Jacks, Wireless Routers), and other items needed to support the operations of facility and care of the operations for a 24/7 operation.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
1. Selection of Vendor	Montgomery County	RFP and specifications	December 2006
2. Equipment Installation	Montgomery County	Systems online	December 2007

Project Performance Measures	Baseline Value	Target Value
1. Completed Specification Document		
2. Completed installation	$2.5 million	$2.5 million

INITIATIVE PLAN

Montgomery County Alternate Public Safety Communications Center (APSCC).

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   The name of this initiative is the Montgomery County Alternate Public Safety Communications Center (APSCC). Without this funding, the backup systems will be unsecured and not ready to accept staff. While 9-1-1 calls will be able to be answered and CAD events dispatched, there is no current place to transfer administrative phone lines to, no headset to communicate with, no capability to send or receive faxes, no capability to make copies, and no capability to connect workstations to the enterprise network in the offices. During a regional catastrophic event which incapacitates the Primary PSCC, we need the capability to provide continuity of operations at our APSCC location.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   Montgomery County, Maryland is located in the National Capital Region (NCR). The County is part of the Greater Washington area and is the largest county in the State of Maryland and the fifth largest metropolitan area in the United States.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

   The Alternate ECC site is designed to operate as a back up site in the event that the primary ECC site has to be vacated for whatever the reason. The site is equipped with a fully functional CAD system and radio system with all the same interfaces as the primary site (MILES, CDMA/CDPD, GEO etc...)

   The computer monitors currently installed at the AECC that are to be used by the Call Takers and Dispatchers are of different size and provides a much smaller viewing area and insufficient, compared as to those installed at the ECC and used routinely. The difference in size creates dissimilar viewing capabilities and reduced field vision for the Telecommunicator. Assuming that the activation of the AECC would occur during time of crisis in Montgomery County, the reduction in functionality would only add to the already tenacious conditions that these Telecommunicators are facing. The request is to replace the existing AECC monitors with the same size monitor as being used at the ECC. The monitors that are to be replaced would be re-used elsewhere in the County.

   JUSTIFICATION: Without the monitors, the dispatchers/calltakers will have a different monitor configuration set up at the AECC which will impact the type of detail and data they are accustomed to seeing in the larger monitor environment. The smaller font size and restricted window size is inadequate in this mission critical environment. The purpose of the alternate facility is to provide a fallback site in the event of catastrophe and having as much as the same look and feel at the alternate facility will relieve some level of impact on the dispatchers/calltaker in an emergency situation.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

The Montgomery County APSCC Initiative will be a collaborative effort between our PSCC Governance Committee, including Homeland Security Department, Police Department, Fire & Rescue Department, Department of Transportation & Public Works and Department of Technology Services.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative relates to the overall State Homeland Security Program by allowing for continuity of operations/continuity of government in the event of a catastrophic disaster that incapacitates the Primary PSCC facility. The Alternate ECC site is designed to operate as a back up site in the event that the primary ECC site has to be vacated for whatever the reason. The facility houses a duplicate hardware infrastructure as the primary site with database updates replicating to the site once per day. This request is to update these databases more frequently than once per day. The preference is to have the back-up facility as up-to-date data as possible or close to real-time. The alternate facility would have up to date CAD data for dispatching in the event of primary site failover. All the Public Safety Databases and Dynamic Configuration Data Files would be updated as close to real time as possible, which include:

- ECC-CAD1
- ECC-CAD2
- RMS1
- MDG
- ECC-AVRR
- ECC-AVS3
- WNG
- RNC
- Level II
- Dynamic Interface Configuration Data (Terminal Server, MOSCAD, Zetron, ANIALI, MILES, TAPI (AlphaNumeric Paging), FARU (alarm transmission)

CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion

January 23, 2006

Jack Markey
Emergency Manager
RESF5

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301-694-1418
jmarkey@fredco-md.net

Project Title:	**Emergency Managers Technology Coordination Subcommittee**	**Estimated Grant Amount**	$1,952,000
NCR Strategic Goal Alignment:	1.6.1: Resource Multi-year Capabilities 2.1.1: Message Creation/Release protocols 3.2.1: Info Sharing and Collaboration Framework 3.2.2: Regional Interoperability 4.2.4: Regional Interoperable Communications 3AUAS5-Regional Operations Plan Development	**Allowability**	(See below)
Estimated Timeline	Funding is identified to support activities during the 2006 grant period, activity is continuous with government staff	**Dependencies and Cost Factors:**	(See below)

Problem Statement/Project Description:

Significant investments have been made over the past and current UASI program years to improve communications, interoperability, and secure collaboration between the region's emergency operations centers, in support of the Chief Administrative Officers and ESF leads of each jurisdiction. This initiative proposal is designed to create and maintain the framework and processes for the ongoing coordination of existing and new technology initiatives and the underlying human processes that facilitate timely, secure, and reliable information flow between the National Capital Region's emergency operations centers. The goal of this initiative is to achieve and maintain the robust information sharing necessary for shared situational awareness and interoperability between EOCs in the National Capital Region.

Mission:
Coordinate integration and maintenance of existing and proposed technology initiatives with emergency management plans and procedures.

Technical Coordination Subcommittee

- One representatives designated by each MD, VA, DC Emergency Management Directors
- Two representatives from County emergency management agencies from each MD and VA as determined by NCR Emergency Managers Committee
- Staff support by consultant (existing consultant performing work under 2005 program)

Additional staff to include:

1. One contract position for Northern Virginia, District of Columbia and Maryland each to work in support of emergency managers, in cooperation with TCS, to develop regional emergency management operations plan in alignment with NCR mutual aid agreement.
2. One contractor to be available as technical resource for maintenance, development, and documentation of technology assets operated by emergency management in cooperation with TCS and local government IT staff.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Tasks	**Collaborating Partners**	**Deliverables**	**Target Date**
1. Identify appropriate partners for EM TCS	NCR Emergency Managers	Recommended	Underway currently
2. Establish EM Technology Coordination Subcommittee	NCR Emergency Managers	Report on mission and composition of committee	1 months from award
3. Issue consultant contract	NCR Emergency Managers	Contract	2 months from award
4. Maintain existing technology investments	NCR EM TCS	Status reports	Continuous
5. Issue procurement orders for additional satellite phones and conferencing units	NCR EM TCS	Devices	4 months from award
6. Develop proposals for capability improvements	NCR EM TCS	Capability improvement plans	Continuous
7. Provide operational input regarding technology investments	NCR EM TCS	Provide operational analysis of technology proposals	Continuous
8. Issue system improvement task orders based on TCS consensus	NCR EM TCS	Additional capabilities	Continuous
9. Develop regional emergency management operational plan, incorporating technology	NCR EM TCS	Regional emergency management EOC to EOC operational plan	Draft at 12 months Final at 24 months

Project Performance Measures	**Baseline Value**	**Target Value**
1. Plan for coordination of WebEOC software versioning between DC, MD, VA and other partners	Informal	Formal
2. Coordination of satellite phone programming, testing, and maintenance	Does not exist	Completed
3. Integration of satellite phone capability into plans and procedures	Does not exist	Integrated
4. Integration of conferencing capabilities with plans and procedures	Does not exist	Integrated
5. Integration of NCRIP Data Exchange Hub capability to support WebEOC	Does not exist	Completed
6. Complete evaluation of feasibility of cooperative management of DHS NCR HSIN (Homeland Security Information Network) Portal in cooperation with Chief Information Officers' Committee	None	Complete

7. Integration of EmNet software into regional plans and procedures	Limited	Complete
8. Technology development and operational integration of technology with plans	Limited	Complete
9. Expand conferencing and satellite communications capabilities to CAOs, Fire and Police Chiefs , and Emergency Managers' offices.	Limited	Complete
10. Develop regional EOC to EOC emergency management operational plan utilizing available technologies	Limited	Complete
11. Integrate WebEOC operations with Virtual JIC being developed by RESF14	None	Complete

Allowability:

2006 Authorized Equipment List

21.8 Consulting Services in Support of Equipment Acquisition

FY 2006 Homeland Security Grant Program: Program Guidance and Application Kit, Appendix D

- Develop and implement homeland security support programs and adopt ongoing DHS National Initiatives
- Develop and enhance plans and protocols
- Hiring of full- or part-time staff or contract/consultants to assist with planning activities (not for the purpose of hiring public safety personnel fulfilling traditional public safety duties)

Dependencies and Cost Factors:

- Continued maintenance funding of 2005 initiatives

INITIATIVE PLAN

Emergency Managers Technology Coordination Subcommittee

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

Emergency Managers Technology Coordination Subcommittee

This initiative would create and maintain the framework and processes for the ongoing coordination of the technology initiatives and underlying human processes that facilitate timely, secure, and reliable information flow between the National Capital Region's emergency operations centers, designed to achieve and maintain the robust information sharing necessary for shared situational awareness and interoperability between EOCs in the National Capital Region.

NCR Strategic Goals addressed:
3.2.1: Info Sharing and Collaboration Framework
3.2.2: Regional Interoperability
3AUAS5-Regional Operations Plan Development

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The geographical context for this proposal is the National Capital Region with the addition of Frederick County, MD

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

Resources

In-place:

- Technical managers for Virginia, Maryland, District of Columbia, Federal and local jurisdictional emergency operations centers

Needed:

- NCR Emergency Managers' Committee Technology Coordination Sub-committee to create and maintain linkages between the region's systems as they now exist, and provide operational and technical coordination of new initiatives that impact the region's emergency managers.
- Funding and staffing to integrate, maintain, and improve existing initiatives:
    - State, Regional, Local WebEOC
    - Satellite Phone connectivity between EOCs and 911 Centers
    - Web/Video/Voice Conferencing
    - EmNet emergency alerting system

Processes

In-place:

- Regional Emergency Coordination Plan
- MWCOG Mutual Aid Agreements

Needed:

- Revised operational plans based on the NCR Mutual Aid Agreement authorized by the Intelligence Reform Act of 2004

Tools

- WebEOC
- NCR Data Exchange Hub
- Web/Video/Audio Conferencing
- Emergency Operations Center and 911 Center satellite phones
- U.S. Department of Homeland Security, Homeland Security Information Network (HSIN)
- EmNet Emergency Alert System

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

The governance for this project would be carried out by forming a standing EOC Technology Coordination Subcommittee, operating as a subcommittee of the NCR Emergency Managers' Committee who in turn reports to the NCR Chief Administrative Officers Committee.

5. Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.

This initiative relates to the National Priorities of information sharing and regional collaboration. This initiative leverages the work being done in the individual jurisdictions, States, and Federal agencies and seeks to ensure that independently funded technology efforts are capable of operating together. This initiative supports objectives under the NCR Homeland Security Strategic Plan, Goals 1, 2, 3, and 4 for planning and decision making, community engagement, prevention and mitigation, and response and recovery, and the gap identified as "Regional Operations Plan Development" as detailed in the concept paper.

<table>
<tr><td colspan="2">CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion</td><td colspan="2">December 22, 2005
Brian M. Berke, Lieutenant,
Arlington County Police Department
1425 N. Courthouse Road
Arlington, Virginia 22201
703-228-4091
bberke@arlingtonva.us</td></tr>
<tr><td>Project Title:</td><td>NCR Secure Communications (NCRSC)</td><td>Estimated Grant Amount</td><td>STE - $3,355.00 x 35 = $117,425.00

CELL - $3,131.00 x 35 = $109,585.00

VTC - $60,000.00 x 35 = $2,100,000.00

FAX - $3,225.00 x 35 =

$112,875.00</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>Strategic Goal 3, Objective 2: To strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness.</td><td>Allowability</td><td>ODP – AEL #4

Interoperable Communications Equipment</td></tr>
<tr><td>Estimated Timeline</td><td>September 1, 2006 through August 30, 2007</td><td>Dependencies and Cost Factors:</td><td>Costs borne by participating jurisdictions:
- ISDN Line
- Physical Security Improvements
- Cellular Service Fees
- GSA Secure Container (Fax)
- Shredder (Fax)
- Other</td></tr>
</table>

Problem Statement/Project Description:

National Capital Region stakeholders currently lack an overarching secure communications network for sharing of classified information across multiple jurisdictions and levels of government. NCRSC provides a robust and secure system of networks allowing NCR State, local, and national partners to establish real-time secure communications to enhance shared situational awareness and facilitate decision making across the region.

See attachments 1-3 for proposed network diagrams and cost data.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
1. Finalize NCR SCN Concept Design	NCR Senior Planning Group for Interoperability	Concept Design Document	September 1, 2006
2. Develop NCR SCN Project Master Plan	NCR SCN project team (Stakeholder Reps.)	Project Plan	October 31, 2006
3. Develop NCR SCN Procurement Strategy	NCR SCN project team (Stakeholder Reps.)	Procurement Strategy Plan	November 15, 2006
4. Determine Physical Security requirements	NCR Security Working Group (SSO)	Requirements Document: Validation & Certification, Clearances	December 1, 2006
5. Conduct Project Risk Assessment (Pitfalls)	NCR SCN project team (Stakeholder Reps.)	Risk Mitigation Plan	January 21, 2007
6. Execute Procurement Plan	NCR SCN project team (Stakeholder Reps.)	Purchase Order(s)	January 31, 2007
7. Execute Project Plans	NCR Security Working Group (SSO) – NSA Approval	Security validation and user certification	January 1, 2007
8. Conduct training and exercises	NCR COG, DHS SLGCP, Information Assurance Office, SSO	Training Plan and exercise scenario's	June 1, 2007
9. Execute Operation and Maintenance (Assessment to determine if equipment still meets our needs).	NCR SCN project team (Stakeholder Reps.)	Operations and testing manual	June 1, 2007
10. Conduct and document Lessons Learned	NCR SCN project team (Stakeholder Reps.)	Lessons Learned document	August 30, 2007

Project Performance Measures	Baseline Value	Target Value
1. Interoperability with existing secure communications systems	20% (est.)	100%
2. Secure interconnectivity between COG members		100%
3. Secure interconnectivity between State, local, and National fusion centers		80%
4. Secure interconnectivity between State, local, and National operations centers		80%
5. Sustain and maintain reliable NCR secure communications networks		100%

INITIATIVE PLAN

NCR Secure Communications (NCRSC):

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   NCR Secure Communications (NCRSC): NCRSC will provide for a robust and secure network of classified communications (voice, data, and video) for the National Capital Region. This initiative addresses the need for interoperability between Federal, State, and local jurisdictions at above the unclassified level.

   This program will address current gaps and shortfalls in sharing real-time classified information among principle partners to establish real-time secure communications to enhance shared situational awareness and facilitate decision making across the region. Because of the sensitive nature of certain types of information, it is essential that access and dissemination be controlled and restricted in order to prevent compromise. The unauthorized release or inadvertent disclosure of such information could, among other things, adversely affect our ability to detect an adversary's intentions, neutralize our offensive capabilities in the pursuit of terrorists, compromise the identity of a confidential human source or operation, or result in physical harm to citizens.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   This initiative is for the National Capital Region (NCR). The NCR encompasses the District of Columbia, Montgomery and Prince George's counties in the state of Maryland, the cities of Alexandria and Falls Church, and the counties of Arlington, Fairfax, Loudon and Prince William in the Commonwealth of Virginia. The concept of NCRSC is to make the secure communication equipment and secure network available to all participating Council of Government (COG) agencies within the NCR.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

   Seven COG agencies (mostly federal) responded that they have some type of secure telephone equipment. This initiative will develop an overall design for secure communications within the NCR. The NCRSC will then conduct analysis of the existing equipment to determine if the existing equipment is interoperable and still viable to be part of the overall solution.

4. **Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.**

   This initiative will fall under the NCR COG Senior Planning Group (SPG) with input from the SPG Interoperability Group. The Office of National Capital Region Coordination (NCRC) will assist with the coordinating, planning and execution of this initiative.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

NCRSC seeks to strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness. If realized, this initiative will expand regional collaboration in regard to information sharing and dissemination.

Scoring Sheet

Interoperable Communications

Scoring Criteria: All candidate Concept Papers are to scored on the basis of compliance with the following 5 criteria. Each criteria is to be scored from 1 to 10 points, with 1 being lowest compliance and 10 being the highest.

Criteria #1: How well does this Concept Paper/Initiative Plan address identified strengths and weaknesses of the 14 Priority Target Capabilities?

Criteria #2: How well does this Concept Paper/Initiative Plan address identified strengths and weaknesses of the 3 Overarching National Priorities?

Criteria #3: How appropriate is the funding requested with the deliverables proposed by the Concept Paper?

Criteria #4: How beneficial will this concept paper be in addressing regional needs?

Criteria #5: How important is it to implement this Concept Paper/Initiative Plan in FY 06?

Concept Paper National Capital Region Video Sharing Distribution System

Related Target Capabilities: Intelligence/Information Sharing and Dissemination

Score:										
Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10

Total: (5-50)

Concept Paper Interoperable Communications System Prince George's County

Related Target Capabilities:

Score:										
Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10

Total: (5-50)

Concept Paper Interoperable Communications System Montgomery County

Related Target Capabilities:	1	2	3	4	5	6	7	8	9	10
Score: Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10

Total: (5-50)

Concept Paper	Reverse 911/Mass Notification										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	First/Critical Responder Credentialing										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	National Capital Region Interoperability Program (NCRIP) Phase 2										
Related Target Capabilities:	Intelligence/Information Sharing and Dissemination, Critical Infrastructure Protection										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	National Capital Region Base MAP (NCRBM) – Regional GIS Base Map Development and Maintenance										
Related Target Capabilities:	Intelligence/Information Sharing and Dissemination, Critical Resource Logistics and Distribution, Planning										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Emergency Video Information Sharing Network - EVISN										
Related Target Capabilities:	Intelligence/Information Sharing and Dissemination										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Prince George's County Interoperable Radio Communications System										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Alternate Public Safety Communications Center (APSCC)										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Emergency Managers Technology Coordination Subcommittee										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	NCR Secure Communications (NCRSC)										
Related Target Capabilities:	Intelligence/Information Sharing and Dissemination, Law Enforcement Investigation and Operations										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

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